

SOME COMPONENTS OF
CURRENT LEADERSHIP IN
INDUSTRIAL ARTS TEACHER EDUCATION

By
ROSE E. DEERENBERGH, JR.

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CHAPTER 2

INTRODUCTION

In this day of big government, big industry, and big labor it is hardly surprising that "complexity" has become a household word among contemporary thinkers. The complicated structure of modern life is being dealt with the tools of rapidly advancing physical science and of the methods of mathematical organization.

It is hardly possible to exaggerate how much accelerated group action there has to be in the modern world. In at least three quarters of his waking hours every man's pen moves and screen and has his being in a succession of group efforts.

It is hard for us to realize that a relatively new fact this increase demands new challenges as the size and number of modern organizations continue to grow. The vital problem is how to make group behavior a better and more efficient experience for people. In every case people are coming to recognize that one crucial factor in the solution of this problem is the quality of leadership displayed within the groups they join.¹

It is this very problem of growing complexity that has brought a conflict of standards to modern man. The speed with which modern has advanced an expanding segment of the physical realm leaves in his mind a baffling contradiction between the old and the new in the moral realm.

The skepticism of the past, to which man found refuge and solace, has been largely retained; but its roots have been stirred by

¹Henry Ford, *The Art of Leadership*, p. 6, New York: Whittaker House, New York-San Francisco, 1955.

A NEW ALLEGE OF MODERN SCIENCE AND SOCIAL STRUCTURE

Modern science in civilization are less often the movement of right against wrong or truth against error than they are of right against right and truth against truth. The present crisis of freedom and order in Western society—and all that is implied in the problem of leadership—could be easier to resolve were it plainly the outcome of antagonistic forces of good and evil. But we are aware that the present predicaments of disaster and the whole tragic scene of life as witnessed in modern literature arises from a cultural condition in which we see the things we value destroyed or endangered by elements we also value. . . . Conflicts between these values in the modern Western world symbolize our deepest social conflicts and make difficult the perspective of leadership.¹

This is a world crying out for leadership—a leadership which will form with society upon a system of social values. For the ever-growing needs of organization has demanded a new system of group psychology.

It is no accident that social scientists today are concerned primarily with investigation of inter-personal relations, group dynamics, status, and leadership. These are symptoms of the times. Only a few years ago, the individual formed the basis for research which today centers upon the social relationships of human organization. Within these relationships, man seeks the answer to the problem of meeting for himself as well as for his group.

¹Robert A. Stebbins, "Leadership and Social Criteria," *Studies in Leadership*, P. Phil. Edited by Alexis C. Goodson, New York: Harper & Bros., 1950.

The interest in leadership, as pronounced at the present time, is a manifestation of the same intellectual pattern that underlies the interest in problems of motivation and dissonance. And beneath this total pattern of ideas lie the psychologically and socially baffling institutional circumstances in which more and more individuals find themselves in contemporary society. These circumstances are in a real sense the very substance of the practical problem of leadership. It is important to remind ourselves continually that leadership is inseparable from specific, continuing conditions.¹

It is clearly evident that leadership is, per se, an elusive term, subject to a variety of definition dependent upon an infinite number of elements of personal and social structure. It can not be neatly circumscribed, nor is it at this stage subject to fixed analysis. A study of leadership is inevitably confronted with all of the intricate confusion faced by the related fields of psychology, sociology, and even of philosophy.

Leadership itself may be "good" or "bad," depending upon the social consequences of the process and/or the opinion of the evaluator. It may be conscious or unconscious, internalized or externalized, direct or indirect. From another viewpoint, the terms "bad," "extroverted," "introverted," and "indirect" can not be applied to leadership. Any category of leadership may be broken down into another sub-category, and none is actually exclusive.

Furthermore, leadership is not simply a quality possessed by a particular individual. It is the sum of many qualities within and

¹ibid., p. 209.

without the individual and includes the all-important aspect, often overlooked in the study, of interaction between individuals and groups. Leadership may not escape its environment.

It is self-evident that leadership is of tremendous importance to social organization, but it is equally obvious that a close study of leadership is as broad and complex as a study of the human race. So that as it says, the subject is demanding increased attention in all major fields of research for the simple reason that wherever in any endeavor its study is allied to the quality of leadership is enjoyed.

General Definitions

As would be expected, there are almost as many definitions of leadership as there are students of the subject. Many definitions, however, are strikingly similar. Where once the accent was placed upon the qualities and personality traits of the leader, the trend today appears to emphasize situation and process. It will be sufficient here to mention only a few general definitions.

According to Bogan⁴:

Leadership is personality in action under group conditions. It includes dominant personality traits of one person and receptive personality traits of many persons. It is interaction between specific traits of one person and other traits of the group, in such a way that the course of action is changed by the act.⁵

⁴Henry S. Bogan, *Leaders and Leadership*, p. 3. New York: E. Appleton-Century Co., Inc., 1936.

A year later (1931), Piore defined leadership as "a process of mutual stimulation which, by successful interplay of relevant individual differences, controls human energy in the pursuit of a common aim."⁵

In the same year, Tiedt writes:

Leadership is the activity of influencing people to cooperate toward some goal which they come to find desirable. . . . The chief emphasis is the idea here advanced to view the motivation and extent of self-inducement caused by the followers of the true leader. Here, a psychologically and deservingly adequate idea of leadership centers its main attention upon the results within the led, as on the attributes or tangible methods of the leader.⁶

Oshe writes in 1937:

Viewed in relation to the individual, leadership is not an attribute of personality but a quality of his role within a particular or specified social system. Viewed in relation to the group, leadership is a quality of the structure.⁷

Reaphill wrote in 1949:

The two assumptions--that leadership is the behavior of an individual directing group activities and that adequacy of leadership is an evaluation of the correspondence between the individual's behavior and the behavior demanded by the situation--are to be tested in the many criteria selected by investigators in the study of leadership. This view of leadership is based in scope, bringing into consideration the group

⁵Paul Piore, *Leadership at Work*, p. 4. Boston: Houghton Mifflin Co., 1931.

⁶Tiedt, op. cit., p. 28.

⁷G. A. Oshe, "The Principles and Traits of Leadership," *Journal of General and Social Psychology*, 33:1 (July, 1947), 283.

situation, the behavior of the leader, and a judgment of leadership adequacy. It is also widely varied by a specific behavior rather than abstract constructs.

Finally, Leinster inferred a definition when he wrote in 1936:

A leader will . . . be considered as any individual whose behavior stimulates patterning of the behavior in some group. By setting some stimuli, he facilitates group action toward a goal or goals, whether the stimuli are verbal, action, or gestural. Whether they are rational, nonrational, or irrational in content is also irrelevant in this context. Whether these stimuli pertain to goals or to means, stimuli about activities or perspective questions, is a secondary consideration, as long as they result in the stimulating of group behavior.⁸

If we accept the premise that leadership is more inclusive than "good leadership" or "immovable leadership," and if it is true that leadership can act to include even the group in which it functions, then it would appear that the last definition is the most comprehensive.

It is interesting to note that ten men, writing fifteen years apart, agree on a specific classification of leadership. These stated:

The leader is an artist--an artist working in a medium which is at once chaotic and universal. His material is people. And just as the task of the artist is one of organization of ideas or materials (if any

⁸John L. Leinster, *Unpublished Essays in Leadership*, p. 3. (Lanham: The Bureau of Educational Research, The State University, 1936).

⁹John L. Leinster, *Unpublished Essays in Leadership*, p. 17. See Bureau Research & Review, 1936.

work of art is to be achieved, as with leadership the bringing of human desire and energy into organized relations becomes a work of high artistry.

Indeed this is more than verbal analogy. The technical definition, the new insight, the direction to a vision, the effort at communication--these are all attributes of the artist which the leader should have. His task of influencing others--looking at the problem first from his point of view--should be done as with artistic economy, precision, and skill.¹⁰

Fifteen years later, Guilmer observed:

In leadership there is something of the most constructive of imagination and experience that goes into the creative process; leadership indeed is an manifestation of the creative productivity. To draw organization out of the raw materials of life is as much the objective of the leader as it is of the artist.¹¹

It would be difficult, if not impossible, to refute this claim for the creative element in leadership, especially with reference to democratic leadership. The problem immediately arises: there are limits to the application of scientific method in the study of leadership. This question will be treated at greater length later in the study.

The Problem

It may be seen at the outset that no single study could hope to consider all of the ramifications of so broad a subject as leadership. Indeed it would be impossible to include all phases of leadership in

¹⁰Wood, *op. cit.*, p. 73.

¹¹Guilmer, *op. cit.*, p. 775.

a particular profession within the group and vice versa, etc.,

This study will be concerned with specific components, or elements, of contemporary leadership in industrial arts teacher education. The study of this subject among educationally significant professions illustrates the underlying quality of modern organization. In 1950, the American Council on Industrial Arts Teacher Education was organized as an offshoot of the American Industrial Arts Association, itself a child of the National Association Association.

The council was the result of a long felt need. It was evident to many of the teacher educators of the American Industrial Arts Association that they were faced with many professional problems which could not be resolved within the framework of the association. Like every other organization, the council will succeed or fail in terms of professional growth in direct ratio to the quality of the leadership it enjoys.

Only competent leaders can convert the tendencies which functionless and divisions of labor create. Only the leader can keep the group committed to that end of aim which alone produces the best results.

In other words, faced as we are by a new kind of world--one in which organized action is the typical, shared, and even of personal effort--organizations require more than to be decentralized. They need to be led because the human relations of the leader are far more critical and necessary to personal responsiveness than the orders of the commander or the routine methods of the executive.¹²

¹²Ibid., pp. 222, p. 2.

There had been little cohesive action among industrial arts teacher educators prior to the organization of the council. True, they have long been active in the work of the American Industrial Arts Association and of the Industrial Arts Section of the American Vocational Association, but these organizations are concerned primarily with specific problems of the public school program. Activities among teacher educators had been limited to publications by individuals and to informal associations not exclusively applicable to the teacher education phase of industrial arts.

A number of central problems which required attention as a national body were revealed in an informal survey of the profession shortly before the council was organized. These fall into three main categories: philosophy, curriculum, and personnel.

The survey indicated, for example, a definite disagreement concerning the basic question: What is industrial art? There was considerable difference of viewpoint as to the relationship of industrial arts to general education and to vocational education. This problem deals with fundamentals of philosophy and shows serious curriculum study by a strong, nationally-organized profession.

Curriculum problems raised by the survey included the questions of uniform standards for industrial arts teacher education, the general structure of vocational teaching, and the direction for curriculum development. Among the problems of personnel were student

recruitment and selection, the function of state and local supervision, and the development of leadership.

The aim of these problems represents the central objective of the research: the maximum improvement of industrial arts teacher education.

To make for leadership, individual differences must not be so great as to preclude similarity of purpose. The presence of a 'common cause' is basic for leadership. It is nonsense to talk of leadership in the abstract since no one can 'just lead' without having a goal. Leadership is always in some sphere of material and human some objective goal, even by leader and follower.¹³

Without able leadership, then, the research can not hope to make progress toward its central objective, or goals; and leadership must be developed in terms of the objective.

Contents of the Study

It is the central purpose of this study to make an initial investigation of certain phases of leadership in industrial arts teacher education. The structural setting of the profession already has been set forth in Yearbook I of the research, Emerging Aspects of Industrial Arts Teacher Education Initiatives: Research and Studies, edited by Walter E. Williams, Jr., and Harvey E. Kuper and published in the spring of 1951. A more detailed picture of professional personnel will be presented in Yearbook II, What's New in Industrial

¹³Figure, pp. 311-312.

1936 Teacher Handbook, edited by Williams and Bergstrom, which will be published in April, 1937).

With the completion of these two studies, it would seem logical that the next step is an approach to the problem of leadership in industrial arts teacher education such as a study of the leaders, themselves. By what means did present leaders approach recruitment to their a general pattern of experience to support leadership? Are there common elements of formal education or of talent? How do present leaders compare with the profession as a whole in such matters as experience in public school teaching, related work experience, and philosophy? Will a study of present leadership offer any clues to the development of future leaders? These are some of the questions this study will attempt to answer.

Leadership and administrative sciences with leadership is a phenomenon conditioned by society's dominant values. Typically, men and women of Western European society believe that leadership behavior may be learned, that one does not have to be "born in the purple" in order to lead. This, in contradiction to the feudal conception of leadership which held that leadership skills were the distilled product of generations of rule.¹⁴

This study will investigate current leadership in industrial arts teacher education through:

1. An identification of present leaders in the profession.
2. A study of theories upon which a cross section of the profession bases a interpretation of leadership.

¹⁴Michener, op. cit., p. 4.

3. The collection, organization, and presentation of certain biographical and ideological data concerning selected leaders.

Limitations of the Study

This study represents a first step in the particular field; and as such, it will be approached within well-defined limits as generally outlined above. Leaders will be identified by members of the profession and studied in terms of biographical data contained in Yearbook II of the American Council on Industrial Arts Teacher Education and of their own lines concerning major problems now facing the profession.

The study does not pretend to inquire into every phase of leadership in industrial arts teacher education. There will be no attempt to evaluate present leadership, to measure personality traits of the leaders, or to define the elements of "good" or "immaculate" leadership. Additional studies must be made before a comprehensive view of the subject will be available, but professional progress in industrial arts teacher education will not await the completion of many years of research. What is done here may at least point the way.

Many unbiased and competent social scientists today work with reverence for social problems, looking forward to an unswerving line when the careful accumulation of reliable, detailed studies will enable them to assume social responsibility. Two questionable assumptions were laylaid in this point of view:

1. That the analysis of collected leadership problems will some day facilitate the handling of the contemporary problems found on the action level. . . .

1. There seems to be no interest and optimistic opinion that special minorities have no satisfaction than of their stayment in which to perfect their training, and bring them, when fully formed, to specified work.¹⁵

European Studies

As far as is known, no study which deals specifically with leadership in industrial area teacher education has been published. There have been many studies pertaining to other specific fields, especially in various phases of industry and the armed forces. Transcendent legacies are given to the work by government-financed projects during World War II, when money and personnel were no object. To a large extent, these studies were devoted to the objective of obtaining greater economy in the production of resources in various aspects of military endeavor. In the past ten decades, there have also been a number of important general studies of leadership, a few of which should be mentioned here.

In 1924, Taggart attacked the problem primarily from the standpoint of the leader. He pointed out the relationship of leadership in inherited groups, to the social stimuli of opportunity and association, and to personality traits.

Intelligence there calls the roll of life; it elicits to the peaks of understanding; it opens the gate to personal achievement; it challenges darkness and error; it leads the way over the ruins of

¹⁵ Ibid., p. 13.

ignorance and prejudice. Superior intellectual achievements give a person a prominence which means or later means in social leadership.¹⁴

In discussing various principles and theories of leadership,

Taggart qualifies the foregoing statement,

According to the marginal significance principle of leadership, one person has in certain things that others want. Hence, he the subject that the one can do something important which others are interested in, he may become a leader in that important particular. Marginal significance provides special opportunities to leaders and to lead.¹⁵

A person of ordinary ability can develop his psychic energy in some one particular and achieve great work. A high level of recognition will be reached—put by a strain of genius but by planning and persistence.¹⁶

He also stresses the vital roles played by the situation and the group, stating that "the study of followership is an important avenue to understanding leadership. . . . The follower and the leader are inseparable."¹⁷

Bornes, also in 1954, authored a report on his development and application of the scientific technique. Finally, she had collaborated in the Bornes study, attended the work in later years and reported, in 1956, on leadership and motivation in the population of a state school for delinquent girls.

¹⁴Taggart, *op. cit.*, p. 128.

¹⁵*Ibid.*, p. 128.

¹⁶*Ibid.*, p. 128.

The findings on leader-individuals likewise reveal wide individual differences in personality. Their reflection in ways of behaving upon leadership is, in addition to a matter of interaction with others.¹⁹

Individuals are propelled into positions of leadership through the response which grants their extraordinary capacity for inter-personal contribution in specific situations.²⁰

Individuals who in this capacity appear as leaders may or may not be found to be leaders in another community of which they later become a part. . . . Nevertheless, it would appear that there are certain qualities in the personalities of the leaders which even when here become an integral part of the individual's personality pattern (such a quality as freedom from self-concern, sufficient to enable him to be concerned with others affecting many others than himself) are likely to remain when they reflect a high level of emotional growth and maturity and thus may be expected to act favorably upon his future relationships with persons in other groups. . . . The "key" of leadership capacity, however, and its results in any personality trait considered singly, are seen in a constellation of related traits, not even in a constellation of related traits, but in the inter-personal contribution of which the individual becomes capable in a specific setting affecting such contribution from him.²¹

In a detailed review of studies dealing with individual characteristics in leadership, Stogdill concluded that, "Qualities, characteristics, and skills required in a leader are determined to a large extent by the demands of the situation in which he is to function as a leader."²²

¹⁹Walter Dill Foustings, *Leadership and Influence*, p. 189. New York: Longman, Green, and Co., 1930.

²⁰*Ibid.*— p. 215.

²¹*Ibid.*— p. 204.

²²W. D. Stogdill, "Personal Factors Associated with Leadership: A Survey of the Literature," *Journal of Leadership*, VII (January, 1940), 65.

Thus distinguished between "command" and "leadership."¹⁷

Command is interested in getting some concerted action which the commander wants to obtain. It is an exercise of power over people.

Leadership is interested in how people can be brought to work together for a common and effectively met happily. It implies . . . the use and creation of power with people. The former is interested solely in the result. The latter is equally concerned about the process by which the result is obtained.¹⁸

He further noted that "the remedy for that bureaucracy with which all organizations are threatened as they grow in size, lies to an appreciable degree in a recognition of the difference in function between the executive and the leader, and in the effort to extend the range and depth of the executive attitude and activity so that the personal influence of a leader is felt on every level."¹⁹

Figure took much the same stand in differentiating "leadership" from "command."²⁰ He emphasized the importance of the "common sense" of leader and followers.

The leader likens among his followers by pointing out common which give them an opportunity to express themselves and in the service of which their powers are developed.²¹

The leader voluntarily associates with others in serving the inevitable leadership of the mass. He is a follower even as he leads.²²

¹⁷ ibid., pp. 111-12.

¹⁸ ibid., p. 11.

¹⁹ ibid., pp. 111-12.

²⁰ ibid., p. 107.

Industrial Union issues with them who approach the study of leadership primarily from the standpoint of the personality traits of the leader.

Most trait studies, flowing from the empirical tradition, have approached the study of personality statistically, not with little regard for causality as an organized whole. . . . It is, in part, because of the lack of any theoretical guide lines that the trait studies of leadership have produced relatively little awareness.¹⁷

That a leader is involved in a network of relationships with other individuals who, together with him, comprise a group, is a consideration the full implications of which elude many trait-analysts.¹⁸

The Social Institute

Since Yearbooks I and II of the American Council on Industrial Arts Teacher Education set the stage for this study, it may be well to mention them again here. They present the environment of the profession and issues are significant in the consideration of leaders among industrial arts teacher educators.

Yearbook I listed institutions, personnel, and programs of 302 institutions of higher learning offering courses leading to certification in industrial arts. A synthesis of data, which precedes the directory of institutions, reveals that 1,000 individuals were employed as industrial arts teacher educators in the United States in

¹⁷Leiderer, *op. cit.*, p. 25.

¹⁸*Ibid.*, p. 26.

the year 1931. Of these, 536 held professional rank, 153 held the doctor's degree, 435 the master's degree, and 179 the bachelor's degree. Institutions offering a degree with a major in industrial arts numbered 153, of which sixty-nine offered a master's degree, and thirteen a doctor's degree.

The number of persons in industrial arts teacher education showed a 44 per cent gain in 1948 over 1941, a 17 per cent gain in 1951 over 1948, and an overall 69 per cent gain during the decade 1941-1951. The number of individuals possessing only a bachelor's degree decreased from 44 per cent of the total in 1941 to 36 per cent of the total in 1948. The three year period 1948-51 reveals a much larger decrease, until in 1951, despite the greatly increased total staff, only 28 per cent held no degree higher than the bachelor's.

One out of every ten staff members in 1951 holds a doctor's degree; 43 per cent hold master's degrees, approximately 30 per cent hold no degree, most of these being in specialized instructor branches for skills work.

Between 1948 and 1951, there was a 45 per cent gain in the number of institutions offering one or more degrees, and during that same period, a gain of 15 per cent in the number offering master's degrees. The number of institutions offering doctoral work has decreased from 20 to 14. It is altogether possible that the earlier figure of 21 included institutions which do not have a specifically designated program for industrial arts at the doctoral level, but rather offer degrees in education or other fields which are open to industrial arts people.²⁵

²⁵ Inventory-Directory of Industrial Arts Teacher Education Institutions, National and District, v. 1. First Yearbook of the American Council on Industrial Arts Teacher Education, Edited by Walter B. Williams, Jr., and Harvey E. Roper. Washington, Indiana: Midlight and Nightlight Publishing Co., 1950.

Basic Instructional Program

Instructional programs in industrial arts teacher education have shown a distinct predilection for the familiar materials areas of metals and woods, as well as drafting. Programs in crafts appear to be on the increase. Transportation is a strong element. Graphic arts is emphasized, but to far less degree than the "big three," of which metals and drawing are still preeminent. . . .

Profile of a Typical Program

The "typical" program has been established for 36 years, hence the date of establishment is 1921. It is designated as an Industrial Arts Department, but while it is more likely to be in a School or College of Education than in any other single institutional sub-division, it is less likely to be classified under Education than under some liberal arts grouping.

The department has five faculty members, with a head who ranks as professor, one associate professor, one assistant professor, and two instructors. There are four with dual one hundred industrial arts subjects, some full-time, and some part-time students, respectively equally divided. It is not likely that there is a graduate program, for only one in three institutions has such a program. If one exists, it is handled by the regular staff, and has the graduate students pursuing arts.

The staff members' professional preparation is not likely to include the attainment of a master's degree. Less than one-half the departments have a staff member possessing a teacher's degree. Instructors may have a master's degree--may be not.

This typical program offers a total of 121 semester hours of work and includes 67 hours of metals, 14 hours each of drawing and woods, 11 hours each of graphic arts and professional courses, 4 hours of electricity, and 5 hours each of crafts and general shop. Other courses, in which transportation experiences predominates, total 18 semester hours. This program leads to a Bachelor of Science degree, usually designated as Bachelor of Science in Education. If a master's degree is offered, it is probably a Master of Arts in Education or a Master of Education degree.

State Laboratory Facilities

The typical laboratory possesses an area of 24,000 square feet and houses equipment valued at \$111,000. . . . Each school currently enrolled has the use of about 250 square feet of space and, *pro rata*, an equipment expenditure of \$1,500.

Twenty-five of the two hundred institutions did not report space devoted to industrial arts. Of 800 institutions, 87 per cent devote space to woods, 79 per cent to metals, 26 per cent to drawing, 27 per cent to general shop, 23 per cent to electricity, 30 per cent to graphic arts, 21 per cent to crafts, and 25 per cent to other areas.

Metals and woods occupy 50 per cent of the total space devoted to industrial arts. The minimum floor area listed for any department is 1,500 square feet, which represents only 2 per cent or less of the total which is 75,000 square feet.²⁵

The study further points out despite the fact that

. . . among all the broad subject matter fields industrial arts has enjoyed the greatest percentage increase in high school enrollment during the fifteen year period from 1926 to 1940. . . . This accomplishment . . . has been achieved under severe handicaps, and . . . the total dollar expenditures for all industrial arts teacher education equipment in the United States is approximately the same as that spent for two other-continental languages.²⁶

Further it will be described in detail in Chapter IV.

²⁵ *IBED*, pp. 4-7.

²⁶ *IBED*, pp. 7-10.

Leadership

It would greatly facilitate the development of leadership in our field if the individual could be put in the test and, depending upon the results, be labelled "leader" or "follower."³⁰

It is doubtful that leadership selection can ever become as refined as the measurement of temperature or salinity. "Leadership" is too complex and composite a quality to lend itself to fine statistical grading.³¹

It would appear that leaders may best be identified by the group which they lead. Despite the fact, pointed out by Lagergren, that "often a real achievement is accomplished so quietly that it may remain unrecognized at the time,"³²

leadership grows out of personal achievement, but personal achievement must be recognized by the group before it becomes leadership. Approachability is essential, and achievement is its natural prelude.³³

Boal collected the opinions of administrators, supervisors, teachers, pupils, and parents to identify outstanding teachers in South Carolina. The selected teachers were then asked for detailed information about their education and experience, their activities as teachers in and out of school, and their reactions to community questions with respect to teachers.³⁴

³⁰ *Leadership*, pp. 222-3. P. 241.

³¹ *Leadership*, pp. 222-3. P. 228.

³² See Boal, *Outstanding Teachers: Their Qualities and Qualifications*, p. 3. Columbia, South Carolina: The Research Council of the Investigation of Educational Qualifications of Teachers in South Carolina, 1960.

Knappell's study of leadership situations was derived from a long questionnaire in which the follower was asked to identify the leader and to supply detailed information concerning the setting and the quality of leadership. The systematic approach employed by Jennings was based on the same principle of follower-identification. The emphasis placed upon the group and the "known cases" by Tuck, Figue, and Guilford points to the importance of the group in the identification of the leader.

This study protocol, then, on the assumption that industrial arts teacher educators, themselves, are best qualified to identify the outstanding leaders in their own profession. A representative group member of the profession was asked to name the leaders and to list criteria upon which their selections were based. This procedure will be described in detail in Chapter III.

The role of experience in the development of leadership is not to be denied. Burgess states that "achievement is an excellent test of leadership because it is objective."²⁵

Many recent definitions of leadership stress the intimate association of the leader with the group and stress of Inglish's strong role for achievement or experience. Biographical data concerning the leaders in industrial arts teacher education will be compared with similar data for the entire profession in Chapter IV.

²⁵Burgess, *op. cit.*, p. 202.

The vital part played by "values" and "objectives" in the realm of leadership has already been defined.

Indeed, today a critical scrutiny of objectives is one of the most arduous duties laymen upon many leaders

If this question is to be frankly faced, the responsibility upon leaders—in the business, political, and educational worlds—is a real one. They have to bring to their consideration of the objectives of their various organizations a degree of sober and scientific disinterestedness which has heretofore been all too rare.²⁶

Leaders were asked to state in their own words the most critical issues presently facing the profession and the approaches that should be taken toward resolving these issues. A cross section of the profession was asked for a similar statement. Replies will be analyzed in Chapter 5.

The final chapter will contain summary and conclusions.

²⁶ *Ibid.*, pp. 212-13, p. 23.

CHAPTER II

TEACHING II OF THE AMERICAN SCHOOL OF INDUSTRIAL ARTS TEACHER EDUCATION

Soon after the organization of the American Council on Industrial Arts Teacher Education in 1928, the Executive Committee decided to publish an annual yearbook concerning professional matters as an important service to be rendered by the council to its membership. The problem of the subject for Yearbook I was one of the first to be faced by the council officers.

It was thought at the time that approximately one hundred and seventy institutions of higher learning were offering a program of courses leading to certification in industrial arts. A limited directory of personnel in industrial arts teacher education had been published by the American Industrial Arts Association in 1928. These the first programs were established at Oswego State Normal School, Oswego, New York, in 1899, and at New York College for the Training of Teachers (now Teachers College of Columbia University) in 1908. Many institutions had integrated programs of various types in the general field of industrial arts teacher education.

This, then, was the aspect of the picture in 1928. From a national standpoint, there had been an uncoordinated development and little exchange of information. It was a somewhat hit-or-miss,

though rapid growth. The Executive Committee of the Council decided, therefore, that the task of Yearbook I was evident—to take stock of the present situation in industrial arts teacher education and to publish a report which would, in effect, present a national picture of the profession in terms of personnel, programs, and physical facilities. The committee believed that the report would facilitate and accelerate the organization of the profession on a national scale and would lay the foundation for future yearbooks, which might consider specific problems.

The original plan for Yearbook I included a directory of institutions, with a list of personnel and descriptions of programs and physical facilities for each institution, and a directory of personnel, with a brief biographical sketch for each teacher educator in the field of industrial arts. The editors soon found, however, that it was impractical to include all of this information in a single volume; hence, Yearbook I deals with the inventory-analysis of facilities, personnel, and programs, while the biographical data concerning teacher educators was reserved for Yearbook II.

The Questionnaire

A questionnaire (Appendix I) was devised in order to secure the biographical data for Yearbook II. The form was entitled Bi'g. Inf. in American Industrial Arts Teacher Mapping and included the following headings:

Name
 Title
 Institution
 Address
 Date of Birth
 Place of Birth
 Formal Education (Degrees, Dates, and Institutions)
 Marital Status (Single Married Number of Children)
 Professional and Work Experience with Dates
 Publications
 Professional and Scientific Organizations (Memberships and
 Offices)
 Areas of Specialization
 Travel
 Recreational Interests

The questionnaires were distributed among the more than one thousand
 individuals revealed by Yearbook I to be teaching in the field of
 industrial arts education at two hundred colleges and universities
 in the United States.

Procedure

A list of institutions of higher learning offering courses
 leading to certification in industrial arts was compiled from The 1944
Industrial Arts Teacher Education Directory. This list was checked for
 accuracy with every state department of education in the nation.

On January 5, 1951, the research assistant addressed a letter
 (Appendix III) to the department head of each of these institutions,
 stating the objectives of the yearbooks and requesting information.
 Enclosed with the letter was a copy of the Reply Slip blank for each
 member of the faculty.

A number of follow-up requests were sent during the remainder of
 the year. About a month after the original mailing, a postcard

Pi Tau, Chair., M. of Trustees. Areas of Spitz.: Minn.;
 Mich. Travel: U.S.; Canada. Jour. Edit.: Mich. Spitz-
 stage; Gardening; Pickings; Silver Thistle.

WENTWORTH, John A., Prof. of Ind. Arts Sch., Wood
 Ward, Oxford, Ohio. B.; Mar. 8, 1893. Charleston, Ill.,
 married. Ten children. Ed.: Niagara, N. Y. State
 Coll., Charleston, 1919; B.S., Univ. of Cincinnati,
 1923; M.B., 1924, 1926; Ph.D. Ohio State Univ., Cincinnati,
 1928. Exp.: Instr., Ind. Arts, University of Ind., Dayton,
 Ill., 1920-25; Pub. Acct., Park Ridge, Ill., 1926-28;
 Pub. Acct., Silver Spring, Ill., 1928-30; Instr., Dir.,
 Ind. Arts, Toledo Coll. of Eng., New Britain, 1930-32;
 Prof. of Ind. Arts Sch., Wood Ward., Oxford, Ohio,
 1932 ---. Public: Contrib. to the following pages:
 "U.S.T.A.'s "Comm. Publ. and Univ. Yearbook for 1940";
 "History of Ind. Research"; "Editor's Index", Vol. 1
 1-4; 1-4-4-4, Ind. Acct., 1930 ---. Organizational
 Chair., 1930-32; U.S.T.A., Pres., 1940-45, Mem. of
 Ind. Sch., 1930-45. Chair., Ind. Sch. Soc., 1940-45.
 Chair., Soc. on Membership and Affiliations, 1940-45.
 Life Mem. Ind. Sch. Soc. Pres. Ind. Sch. Soc.,
 for Ind. 1930 times; U.S.T.A., Life mem.; Ind. Sch.
 Soc. Pres., 1940-45; Sp. Ind. Arts Soc., Pres.,
 1930-45; Soc. Ind. Arts Soc., Instr., 1930-45;
 Spitz: Pi Tau, Acting Dir. Instr., 1945-47, Executive
 Soc.; Phi Delta Kappa. Areas of Spitz.: Probab.
 Courses; Graphic Arts; Soc. Study. Travel: U.S.;
 Canada; Mexico. Jour. Edit.: Rusticraft; Gardening.

WENTWORTH, Harold, Asst. Prof., Wayne Univ.,
 Detroit, Mich. B.; Sept. 16, 1904. Wheaton, Ill.,
 married. Seven children. Ed.: B.S., The South Inst.,
 Hammond, Ind., 1928; B.S., Univ. of Detroit; Ohio
 State Univ., Exp.: Instr., Detroit Pub. Acct., 1930-
 35; Wayne Univ., Detroit, Mich., 1937 ---; Chgo. Ind.,
 Pioneer Branch, Detroit U.S.T.A., 1938-40; Editorial
 Sect., The Ind. Study Soc., Detroit, Mich., 1940-45.
 Soc.: Ind. Sch. Soc. (Executive Director), Ind. Sch. Soc. 1940-45.
 Publications Co.-Editor, Vol. 1-4; U.S.T.A., Instr.,
 1930-35, Pres., 1932 ---; Spitz: Pi Tau, President
 of Spitz: Pi Tau Soc., Ind. Sch. Soc. Areas of Spitz.:
 Ind. Arts; Soc.; Education; Travel: U.S.; Jour. Edit.:
 Rusticraft.

Analysis of Sources

James L. Talge analyzed the first five hundred returns of the Teacher II questionnaire as a part of his master's thesis presented at the University of Florida in June, 1951. Since no significant changes are indicated by subsequent returns, data for this report will be derived from Talge's study.

Place of Birth

New York, Massachusetts, and Texas are the native states of about 25 per cent of the industrial arts teacher educators. Eighty-three per cent were born in the fifteen states of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, and Wisconsin.

Seven states were not listed by a single individual, and less than five were born in each of twenty states. Twenty-five or more persons were born in each of seven states.

Approximately 2 per cent were foreign-born--four in Canada and one each in France, Germany, England, and Sweden.

Table I on the following page reveals a percentage distribution of birthplaces by state in the following geographical arrangements:

East - Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, Delaware, New Jersey, District of Columbia, and Maryland.

Midwest - Ohio, Indiana, Michigan, Illinois, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

TABLE I

Geographical distribution of industrial

Geographical Area	Percentage of Males
East	39
Midwest	48
South	24
West	7
Foreign	2
Total	100

East - Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and Texas.

Midwest - Wisconsin, Washington, Oregon, Idaho, Wyoming, Colorado, Utah, Arizona, New Mexico, Nevada, and California.

Family Status

Only 8 per cent of the industrial male teacher students were married, while 17 per cent were married and childless. The number of children in the families of the remaining 27 per cent ranged from one to ten, with an average of 1.74.

Of the total number of respondents, 18 per cent had one child, and 15 per cent had two children. Only 17 per cent had more than two, 8 per cent more than three, and 1 per cent more than four.

Table II indicates the distribution of children of married individuals.

TABLE II

TABLE SHOWING PERCENTAGE DISTRIBUTION OF CHILDREN

Number of Children	Percentage of Married Persons
0	18
1	30
2	39
3	14
More than 3	total 100

Age.

The average age of industrial arts teachers elsewhere was 41.5 years. The youngest was twenty-four, and the were sixty-eight years of age. About 8 per cent were more than sixty, and 70 per cent were between the ages of twenty-eight and forty-six. Table III, shown on the following page, indicates the age distribution of the profession.

TABLE III

TABLE SHOWS FREQUENCY DISTRIBUTION OF AGE

Age Range in Years	Percentage of Individuals
21 - 25	7
26 - 30	34
31 - 35	31
36 - 40	16
41 - 45	8
	Total 100

Industrial Experience

Table IV, page 33, indicates that about three of every four industrial arts teacher educators hold at least a master's degree. In degrees we reported by only 1.4 per cent. The bachelor's degree was held by 22.4 per cent and the doctor's degree by 11.4 per cent.

The average age at which the doctor's degree was awarded was 39.45 years, with a range of from twenty-eight to fifty-six years of age. Fifty-five per cent received the doctor's degree after age thirty-six, and thirteen per cent after age forty-five. It may be noted that of the few who hold no degree, such are in the upper age brackets and have had considerable industrial experience.

TABLE IV

TABLE SHOWING FREQUENCY DISTRIBUTION OF DEGREES

Degree	Percentage
No Degree	1.4
Master's Degree	18.6
Doctor's Degree	76.0
Doctor's Degree	total 100

Extent Teaching Experience

The students averaged 9.8 years of experience in teaching industrial arts education on the college level. One individual reported forty-one years of experience, and about 10 per cent had more than twenty-five years in the profession. Table V on the following page reveals that five years or less experience was reported by 10 per cent.

TABLE V
TABLE SHOWING PERCENTAGE DISTRIBUTION
OF COLLEGE TEACHERS

Range of Years	Percentage
1 - 5	20
6 - 10	15
11 - 15	10
16 - 20	5
21 - 25	6
26 - 30	6
31 - 35	3
36 - 40	
	TOTAL $\frac{7}{100}$

Public School Teaching Experience

It was somewhat startling to discover, as revealed in Table VI on page 25, that 25 per cent, or slightly more than one in every five, industrial arts teacher candidates had no experience in teaching in the public schools. Seven per cent reported only one year, and 13 per cent reported two years or less experience in public school teaching.

The average number of years in the public schools was 2.4. Sixty-three per cent reported more than five years of such experience, 22 per cent more than ten years, and 7 per cent more than twenty years.

TABLE VI

TABLE SHOWS PERCENTAGE DISTRIBUTION OF
PUBLIC SCHOOL TEACHERS

Range of Years	Percentage
0	24
1 - 5	36
6 - 10	23
11 - 15	13
16 - 20	5
21 - 25	
	Total <u>100</u>

Publications and Communications

Twelve per cent of the industrial arts teacher respondents have written one or more books; while 27 per cent, or more than one in four, have contributed at least one article to a professional periodical.

Of the professional organizations, Table VII on page 36 indicates that 36 per cent reported membership in the American Vocational Association, and 34 per cent were members of the American Industrial Arts Association. The National Association Association reported for 36 per cent, the American Council on Industrial Arts Teacher Education 24 per cent. Among the professional fraternities, 46 per cent were

members of Sigma Xi Tau, while 37 per cent were affiliated with Phi Delta Kappa.

Table VII

TABLE SHOWING MEMBERSHIP REPRESENTATION
OF NATIONAL ORGANIZATIONS

Organization	Percentage
American Vocational Association	34
American Industrial Arts Association	34
National Education Association	32
American Council on Industrial Arts Teacher Education	28
National Association of Industrial Teacher Educators	27
American Association of University Professors	25
Sigma Xi Tau	40
Phi Delta Kappa	37
Kappa Lambda Kappa	15
Kappa Delta Pi	9

Here then, fifty national professional organizations and twenty fraternalities were listed. Among the organizations were:

National Vocational Education Association
 American Association of Curriculum Development
 American Designers Institute
 American Society of Engineering Education
 National Artistic Educational Council
 American Training Society
 National Committee on Arts and Crafts

American Association of Superintendents of Manual Teachers
 International Graphic Arts Education Association
 National Association for Printing Education
 American Institute of Architects
 National Committee on Investigation of Industrial Arts
 Teacher Education
 American Craftsmen's Education Council
 American Education Research Association
 National Association of Working Officials
 Society for the Advancement of American Education
 American Society of Text Engineers
 American Radio Relay League
 American Society of Agricultural Engineers
 American Cryptological Club
 American Society of Artists
 American Institute of Electrical Engineers
 American Photomicrograph Society
 American Society of Mathematics
 National Art Education Association
 National Technical Society
 American Society of Mechanical Engineers
 American Association of Computational Theorists

Travel and Recreational Activities

Forty-seven per cent of the highschool arts teacher educators reported foreign travel, three-fourths during service in the armed forces. Travel ranged from brief study trips, the teachers to trips around the world. Nearly all reported extensive travel in the United States.

About 75 per cent stated attended seminars, most popular of which fell under the heading of outdoor sports. One individual was state chairman of the sports board; still another is former world's champion wild water race pilot. Among the most frequently mentioned hobbies were photography, model building, home workshop, gardening,

civil affairs, bookkeeping, boy leader, church work, radio, home planning and maintenance, recreation, music, food building, travel, and crafts.

The *Strained* Individual

Based on the preceding data, the hypothetical typical industrial arts teacher character is thirty-two years old and is a native of New York. He holds a master's degree, has taught in the public schools for seven years, and has been teaching on the college level for ten years. He is a member of several national organizations, including the American Vocational Association, the American Industrial Arts Association, and Spelling Pi Tau. He has written a few articles for professional journals and served overseas while in the armed forces. He is an ardent sports enthusiast, but he also spends considerable leisure time in his home workshop.

CHAPTER III

IDENTIFICATION OF LEADERS

Chapter I sought to establish the validity of the principle of identification of current leadership by the group in which the leadership is functioning. It was stated that this study "proceeds on the assumption that industrial arts teacher educators, themselves, are best qualified to identify the existing leaders in their own profession."

Indeed, for all practical purposes, this principle would seem to be self-evident. It is true that accomplishment which may result in leadership is not always immediately recognized, but in that case, the leadership element is delayed. It is not "current" leadership. Current leadership demands immediate recognition.

The Questionnaire

At the time that the questionnaire (Appendix III) was devised, there were approximately one thousand known industrial arts teacher educators in the United States. About one hundred were members of the recently-organized American Council on Industrial Arts Teacher Education. There were two hundred institutions of higher learning known to be offering courses leading to certification in industrial arts.

It was decided to use the membership list of the council, adding

a known industrial arts teacher education for each institution not represented in the census, as the mailing list for the questionnaire. The compilation resulted in a total list of 493 individual industrial arts teacher educators.

The questionnaire took the form of a simple letter requesting a "list of those whom you consider outstanding national leaders in industrial arts teacher education" and "brief reasons for your selections."¹ Enclosed with the letter was a form (Appendix II) with blanks for the names of individuals and institutions selected and general criteria for selection. Also attached was a self-addressed, stamped envelope.

It should be noted to suggest the number of leaders who should be selected or the criteria upon which the selections should be based. Since it was the opinion of the members of the profession that was sought, it was believed that any such suggestion would invalidate the results.

The questionnaires were mailed on April 15, 1958, and no follow-up letters were sent.

Results

Leaders were identified on the basis of 135 returns from thirty-seven states, as revealed in Table VIII, which appears on the following page. A few more returns were received after the deadline, but these were discarded. The study is based, then, on a return of approximately 47 per cent of the original mailing.

TABLE VIII

TABLE SHOWS DISTRIBUTION OF SPICES IN STATES

State	Number of Spices
Alabama	2
Arizona	0
Arkansas	2
California	6
Colorado	3
Connecticut	1
Delaware	0
District of Columbia	0
Florida	3
Georgia	3
Idaho	0
Illinois	4
Indiana	1
Iowa	3
Kansas	3
Kentucky	1
Louisiana	1
Maine	1
Maryland	1
Massachusetts	0

TABLE II
TABLE SHOWING DISTRIBUTION OF REVENUE BY AREA

Area	Factor of Revenue	Percentage
East	19	34
Midwest	24	39
South	29	37
West	18	16
TOTAL	100	100

However, Table I on the following page reveals that 37 per cent of the revenue came from the southern area, which accounts for 37 per cent of the industrial arts teacher education programs; that 19 per cent of the revenue came from the western area, which accounts for 16 per cent of the programs; that 39 per cent of the revenue came from the midwestern area, which accounts for 39 per cent of the programs; and that 34 per cent of the revenue came from the eastern area, which accounts for 34 per cent of the programs.

TABLE I
 TOTAL SURVEY CONTRIBUTION OF PROPOSAL BY AREA

Area	Number of Proposals	Percentage
East	20	18
Midwest	46	32
South	23	17
West	18 17	13 12
TOTAL	107	100

Letter Identification

Of the men invited and five returned, seven individuals listed leaders but failed to list any criteria for selection. One listed criteria without names of leaders.

Two persons added complimentary notes concerning the proposed study, and two took the opposite view. One of the latter wrote: "It seems that your time should be with something other than dealing with this, as all will have different men in mind, however, when you have found the outstanding man you know's found such."¹ The other wrote: "I am afraid you are off on the wrong track. Anything I could give you would be opinion and not fact."²

A few individuals took the trouble to mention possible pitfalls of a leadership study. Illustrative of these was a letter which stated:

Many individuals who are actually leaders frequently are called in various such as papers, as well as in published reports. This means that, if true, through our collection national leaders in fiction may not of the leaders and with the others. To also over-emphasize one of the leaders and thus distort a whole picture.

The classification of title which case is used most easily are to be found in the way in which an officer acquires a synthetic reputation built up by self-publicizing, or the publicizing by a group, or by a professional venture in the field, in lieu of a deserved reputation as strictly professional grounds. In other cases, we have allowed the mouth-speaking effects of political debate, whereby certain individuals get themselves elected to office and thus perpetuate themselves in office, as an evidence of leadership in all systems of the field. Sometimes these personal office holders are leaders in other ways; but all too frequently they are not, or if they once were, their true professional qualities are sacrificed in their search to continue in political office.

A total of 108 cases were mentioned in the returns. However, fifty-five of these were mentioned once, most of them known only locally. Sometimes additional names were mentioned fewer than five times, leaving a total of thirty-six individuals who were mentioned five times or more.

Between the thirteenth and fourteenth individual, there was a definite break in the number of times mentioned from tenip-ten to eighteen. Below the thirteenth individual, no similar break appeared. Since it was found that the first thirteen individuals, in point of number of times mentioned, might be considered the outstanding national leaders in industrial arts teacher education.

Table II, on the following page, reveals the number of times mentioned and the rank of each of the selected leaders. The first

TABLE XI
TABLE SHOWING ORDER OF TILES POSITIONED

Leader Number	Time Position	Rank
1	37	1
2	35	2
3	42	3,4
4	41	3,4
5	40	5
6	36	6
7	33	7
8	32	8
9	30	9
10	28	10
11	26	11
12	25	12
13	22	13

leader was notified fifty-nine times, or by more than half of those participating in the survey. It is interesting to note the five distinct groupings: leaders 1 and 2 were notified from fifty-nine to fifty-five times; leaders 3, 4, and 5 from forty-two to forty times; leaders 6, 7, and 8 from thirty-six to thirty-three times; 9, 10, and

11 from twenty to twenty-six times; and leaders 12 and 13 from twenty-three to twenty-five times.

Leader 13 was mentioned by about 21 per cent of those who returned the questionnaire. The drop after Leader 13 was to 17 per cent.

Criteria for Selection

The 105 individuals who returned the questionnaire submitted for 403 listings as criteria for the selection of leaders. This is an average of about four criteria for each individual, but the number ranged from one to twelve.

Fifty-four separate criteria were identified. These fell into the following eleven categories:

1. Personal and Professional Qualities
2. Publications
3. General Principles of Industrial Arts Teacher Education
4. Professional Organization Activity
5. Status
6. Program Development
7. Philosophy
8. Leadership
9. Research
10. Experience
11. Education

The following criteria were listed under "Personal and Professional Qualities":

Character
Ability to give support
Personality
Initiative
Willingness to accept
Ability to inspire
Reliability
Professional acceptance
Working ability
Interest in students
Organizational ability
Craftsmanship
Administrative ability

These criteria are the result of consolidating nearly-five separate listings. Nearly identical wording is used in relatively few cases. For example, the word "character" was listed only twice and "personality" appeared ten times; but there were a number of single listings which fell logically under these headings. Such criteria as "loyalty," "personal respectability and honor," and "honesty" were included under "character." "Personality" includes such variations as "personality and style," "good personality," and "quality of personality."

Table III, which appears on the following pages, reveals the number of listings for each criterion under the specific general headings. Other typical expressions under "Personal and Professional Qualities" were "ability as a scholar," "served unselfishly," "willingness to render service to the profession," "possessed personal and professional qualities," "dedication for the profession," "loyalty

TABLE III

TABLE SHOWS RANGE OF LISTINGS FOR EACH CATEGORY

Criteria	Number of Listings
Personal and Professional Qualities	
Character	3
Ability to win respect	10
Integrity	4
Initiative	2
Willingness to cooperate	8
Ability to inspire	8
Spontaneity	3
Professional competence	13
Teaching ability	24
Interest in students	8
Organizational ability	8
Efficiency	3
Administrative ability	4
Total	75
Publications	
Peer-reviewed writing	24
Contributions to literature	12
Publications	10
Articles	4
Editor	7
Books	7
Editor	4
Total	78
General Practices	
Presentation of industrial arts	
- lecture practices	8
Speaking and lecturing	12
Travel and visits	4
Special activities with	12
General contributions	14
Influence on the profession	4

TABLE III--Continued

Definition	Number of Listings
Support of students	3
Professional publications	3
Development of national policies	11
TOTAL	17
Professional Organization Activity	
Active in meetings	8
Active in professional organizations	9
Contributed to local, state, and national programs	1
Active in local, state, and national organizations	4
Active in national organizations	17
Active in state and national organizations	7
Active in state organizations	10
TOTAL	56
Status	
Position held	26
Professional recognition	16
Community status	1
TOTAL	43
Program Development	
Developed strong program	18
Developed strong undergraduate program	3
Developed strong graduate program	4
TOTAL	25
Philosophy	
Revision of social philosophy	13
Development of new ideas	7
Inspirational viewpoint	1
TOTAL	21

TABLE III--Continued

Criteria	Number of Listings
Leadership	
General leadership	14
State leadership	8
National leadership	8
Local leadership	1
University leadership	4
TOTAL	35
Research	TOTAL 13
Experience	
Length of service	2
Experience in the field	5
TOTAL	7
Members	
Professional preparation	5
Degrees held	5
TOTAL	10

to industrial arts,² professional growth,² communications and teaching teacher,² and "ability to organize current work."²

Criteria included under the category of "Publications" were the

following:

Professional writing
Contributions to literature
Publications
Articles
Books
Books
Editor.

These represent a total of seven-plus separate listings. Typical expressions were: "savings," "published materials," "quantity and quality of writing," "contributed to publications," "professional publications," "contributed to field by writing," "editor of a national journal," "author of valuable books," and "author of magazine articles."

In the category of "General Promotion of Industrial Arts Teacher Education" were the following activities:

- Promotion of industrial arts teacher education
- Speaking and lecturing
- Travel and visits
- Special committee work
- General contributions
- Influence on the profession
- Names of students
- Professional relations
- Development of national policies

Typical expressions of the seven-plus separate listings in this category were: "travel for speaking engagements," "views expressed in speeches," "promotes sound program of industrial arts," "work as contribution procedure," "ability as a speaker," "travel and contacts to promote nationally," "willingness to visit schools," and "state and national promotion of industrial arts."

The category of "Professional Organization Activity" included the following activities:

- Active at meetings
- Active in professional organizations
- Contributed to local, state, and national programs
- Active in local, state, and national organizations
- Active in state and national organizations
- Active in national organizations
- Active in state organizations

Work-experience listings were recorded in this category. Among the typical expressions were: "participated in activities," "participated in professional meetings," "active in local, state, and national associations and programs," "participated in state and national organizations," "influential in national organizations," "contributed to activities," and "participation in organizations."

The three criteria listed under the general category of "Status" were:

Position held
Professional recognition
Community status

The following are typical of the three-three specific listings in this category: "past or present (government)," "past or present work in position," "present position," "honorary recognition," "distinctions," "recognition of associates," and "outstanding position held."

In the category of "Program Development," three criteria were listed:

Developed strong program
Developed strong undergraduate program
Developed strong graduate program

Typical of the expressions in this category, among four-to-six listings, were: "built strong college program," "improved and expanded undergraduate program," "new program," "first program in general education," "expanding of one level program," "head of graduate program," and "director of smallest program."

The following criteria were listed under the general category of "Background":

Beliefs of social philosophy
Development of new ideas
Progressive viewpoint

These are meant to illustrate the four-to-five listings in this category.

A separate category was derived under the general label, "Leadership," despite the fact that leadership was hardly to be considered a criterion of leadership. The term appeared seventeen times under the five listings listed in Table XII.

"Research" was listed thirteen times, in nearly every case on the single word. "Experience" appeared three times as "length of service," and as "experience in the field" ten times. "Inquiries" was listed only ten times, equally divided between "professional preparation" and "layman held."

Table XIII, which appears on the following page, reveals the percentages of listings in each general category. It would indicate a particularly strong emphasis by industrial arts teacher educators on personal and professional qualities in the classification of leadership. Contributions to professional literature, general promotion of industrial arts teacher education, and active participation in professional organizations are important factors. History, program development, and philosophy enter into the picture, but in small

agreed that research, experience, and formal education are not considered outstanding factors in determining leadership.

TABLE VIII

PERCENTAGE PERCEPTION OF LEADERS IN EACH CATEGORY

Category	Percentage
Personal and Professional Qualities	23
Publications	18
General Function	17
Professional Organization Activity	11
History	8
Program Development	6
Philosophy	5
Leadership	4
Research	3
Experience	3
Education	2
TOTAL	100

CHAPTER IV

HOW ATTACHED INDIVIDUAL RELATIVES

It is the purpose here to present certain biographical data concerning the selected leaders, as gleaned from Yearbook VI of the American Council on Industrial Arts Teacher Education, to summarize, and to compare the data with that of the entire profession.

Leader VI, as listed in Table II, will not be included in the remaining portion of this study, since data for this individual was not made available for Yearbook VI. The individual in question is no longer actively engaged as an industrial arts teacher elsewhere.

Leaders VIII hereafter be identified by letter and will not be considered in order of selection as in Table II. Its purpose would be served for this study through positive identification of the leaders by name or by order of selection.

• Leader A •

Leader A, Professor of Industrial Arts Education at a large eastern state college, was born in 1896 in the state of Minnesota. He is married and has three children. He holds a diploma and two degrees from two southeastern institutions and received his Master of Science degree in 1930. In eight years of experience in public school teaching, he held three separate positions. He has held positions at two institutions of higher learning in the past twenty-five years. With a

total of thirty-three years of experience in education. Leader A has held his present position since 1944. He is the author of five volumes, co-author of two, and he has contributed to at least eight professional journals. He is a member of the American Vocational Association, American Industrial Arts Association, National Association of Industrial Teacher Educators, Connecticut Valley Industrial Arts Conference, his state vocational and education associations, American Arts Association, National Committee on Accreditation of Industrial Arts, The Delta Kappa, and Beta Lambda Sigma. He is president of one organization and a department secretary of another. Area of specialty is curriculum and course making. He has travelled in the United States and Canada, and his principal vocational interest is the utilization of various types of tools.

c. Leader B

Leader B is a high official of a midwestern college, well-known for the industrial arts program. He was born in Wisconsin in 1896 and is married and has two children. Holder of degrees from three midwestern institutions of higher learning, he received the Ph.D. degree in 1923. He taught one year each in four different public schools and has held six positions in twenty-nine years in higher education. He accepted his present position in 1942. He has visited the War Relocation Authority and having served in the armed forces in World Wars I and II, he is now a colonel in the army reserve. He is the author of three volumes and co-author of five. He has contributed about

various articles in a large number of professional magazines. Lander E is a member of the American Association for Advancement of Science, American Association for Advancement of Education, American Vocational Association, National Education Association, American Educational Research Association, American Association of Teacher Trainers in Vocational Education, Michigan Industrial Education Society, his state vocational and education associations, Mississippi Valley Industrial Arts Conference, Phi Delta Kappa, Kappa Pi Tau, Eta Sigma Phi, and Iota Lambda Sigma. He is a life member of his organizations. Life director of one, former president of one, immediate member of one fraternity and national honorary chairman of two. His area of specialty is administration.

J. LANDER E.

Born in Pennsylvania in 1913, Lander E is Professor of Industrial Education at a large eastern state university. He is married and has six children. He holds two degrees from an eastern college and two from a midwestern state university, having received his Ph.D degree in 1941. He also spent almost a year of post-doctoral study. After teaching industrial arts in a high school for two years, he held three separate positions at institutions of higher learning. During World War II, he performed important supervisory work in an aircraft plant, and he has held his present position since 1945. He has contributed to three volumes and three professional magazines. He is a member of the American Vocational Association, American Industrial Arts Association,

American Council on Industrial Arts Teacher Education, Ernest Horn Society, John Henry Society, Spelling Pi Tau, Beta Lambda Sigma, Phi Delta Kappa, and Phi Sigma Pi. Area of specialty is industrial arts teacher education and travel has been limited to the United States. His avocational interests include various types of construction and the study of manufacturing laboratories.

- Leader 2 -

Leader 2, Professor of Industrial Arts at a four-year college university, was born in Europe in 1886. He is married and has one child. Having received his bachelor's degree from a continental institution, he earned the Master of Arts degree at a western university. He served as an industrial arts supervisor in a public school system for ten years and has a total of thirty-three years as an industrial arts teacher educator at two institutions of higher learning. He has held three positions at the same institution in the past twenty-seven years and has held his present position since 1947. He is the author of three volumes, two of which have had especially wide circulation as texts, is the co-author of one volume, and has contributed to a large number of magazines and books. He is a life member of the American Vocational Association and a member of Phi Delta Kappa, Phi Sigma Pi, Pi Sigma Chi, and Spelling Pi Tau. He is national secretary of the Vocational and Technical Education and holds an important executive chairmanship in the association. He has travelled in England and Sweden.

- LEONARD E. -

Leonard E. is Professor of Education and Head of the Department of Industrial Arts and Vocational Education at a southern state university. Born in 1907 in the state of Ohio, he is married and has three children. He holds three degrees from a southeastern state university, where he received the Ph.D. degree in 1944. He also studied at four other institutions of higher learning in the South, Midwest, and Far West. He was associated with public school education for eight years, equally divided between two schools and has held three positions at institutions of higher learning in the past thirteen years. He has also taught in summer camps, worked as a part-time construction contractor, railroad worker, and served as a consultant to national and state educational bodies. He is a member of the American Council on Industrial Arts Teacher Education, American Industrial Arts Association, his state industrial arts association, School and College Conference of the National Safety Council, American Vocational Association, Sigma Xi Tau, Phi Delta Kappa, Kappa Delta Pi, and Kappa Pi. He has served as president of three of the organizations and vice-president of two, and as chairman of five important national committees. He is a lifetime member and brother of one of the fraternities and has been president in the national industrial arts master program. He is the author of three textbooks and co-author of one, editor of two, and co-editor of two. He has contributed to many professional journals. Area of specialty is teaching graduates

professional courses in Industrial arts and vocational education. Teacher F has travelled widely in China, Japan, Russia, the United States and Canada. His avocational interests include laboratory planning, architecture, and the raising of domestic animals.

Teacher E

Born in Kansas in 1904, Teacher E is Professor and Head of the Industrial Education department at a large western college. He is married and has no children. Holder of his degree from a midwestern state teachers college, he received the M.S. degree from an eastern state college in 1935. He has had five years of experience in three positions in the public schools and a like number of positions in seven years of association with institutions of higher learning. He has held his present position since 1946. Author of seven volumes and co-author of three, he has contributed thirty-two articles to four professional journals. He is a member of his state vocational, education, and industrial arts associations, Institute of All Age Activities, Wisconsin Association of Principal Junior Colleges, American Industrial Arts Association, American Vocational Association, Wisconsin Valley Industrial Arts Conference, Iowa Trade Union, and Phi Delta Kappa. He has been president and vice-president of two organizations and has served as chairman of important committees or divisions in four others. Teacher E specializes in woodwork, handicrafts, and welding. Travel in the United States included a trip

through association studies with visits to twenty-three industrial arts teacher education departments. His activities are handicrafts, travel, and gardening.

Leader 2 -

Leader 2, Professor of Education at a large midwestern state university, was born in 1897 in the state of Illinois. He is married and has an offspring. He holds two degrees from a midwestern state university and received his Ph.D degree from an eastern university in 1938. He has had five years of experience in the public schools of two states and has been connected with his present institution since 1932. In addition to six years of practical work experience, he has held numerous administrative and civil defense posts in the armed forces both here and abroad. He served in both World Wars and is now a lieutenant-colonel in the reserves. Co-author of one volume, he has contributed many articles to several professional periodicals. He is a member of the American Industrial Arts Association, National Education Association, American Vocational Association, American Association of School Administrators, North Central Association of Colleges and Secondary Schools, Western Arts Association, President's Advisory Committee on Industrial Safety, and Spelling PL Two. He is the founder of two of the organizations and former president of two. Leader 2 specializes in research and professional courses and has travelled extensively in the United States and abroad.

LEADER 2

Born in Texas in 1887, Leader 2 is Professor of Industrial Hygiene, Sanitine, at a midwestern state university. He is married and has one child, one daughter. He has studied at three institutions of higher learning and received his Master of Arts degree from a western college in 1916. He taught at three public schools over a period of four years, at a state teachers college for eleven years, and at a university for twenty-one years. For a year following World War I, he was director of vocational training at a United States Army camp. He is the author of four volumes and co-author of four; and he has contributed a large number of brochures, research reports, and magazine articles. He is a member of the American Vocational Association, his state vocational association, Phi Delta Kappa, Kappa Delta Pi, Kappa Phi Kappa, and Beta Beta Beta. He is former president of one of the associations, former vice-president of one, and honorary life member of one of the organizations.

LEADER 3

Leader 3 is head of a school of industrial arts at a large southern college. Born in Texas in 1889, he is married and has no children. Holder of five degrees from three institutions, he received the Ph.D. degree at a midwestern state university in 1929. He taught for three years in one public school and for four years in another, and he has been associated with his present college since 1914. He is the author of four volumes and has contributed a large number of articles.

to at least seven professional journals. He is a member of the American Industrial Arts Association, National Education Association, American Vocational Association, American Society for Engineering Education, his state education association, Washington Valley Industrial Arts Conference, School Shop Safety Education Committee of the National Safety Council, his state advisory committee for industrial arts, his shop safety council, President's Committee on Industrial Safety, Phi Delta Kappa, Delta Lambda Pieta, Sigma Pi Tau, and Kappa Delta Pi. Latest 1 specialties in mechanics, general shop, graduate work, and shop safety. He has traveled widely in the United States, and his vocational interests include machine, travel, and community safety.

- Teacher J -

Teacher J, head of industrial arts teacher education at a well-known eastern teachers college, was born in the state of New York in 1897. He is married and has no children. Holder of three degrees from two universities, he received the Ph.D. degree at a northeastern state university in 1941. He obtained eleven years of experience at three secondary schools before entering college teaching in 1923. He has held his present position since 1944. He is the author of one volume, used widely as a text, and co-author of two. He also has contributed articles to many professional periodicals and has lectured before a large number of industrial arts gatherings. He is a member of the American Industrial Arts Association, American Council on

Industrial and Teacher Education, National Association of Industrial Teacher Educators, American Vocational Association, his state vocational and industrial arts associations, National PI Ten, and Phi Delta Kappa. He has been president of two of the national organizations, chairman of numerous committees, and is a trustee of a fraternity. His areas of specialty include administration and curriculum. He has travelled widely in the United States and Canada and his avocational interests are metal spinning, gardening, fishing, and color photography.

(Leader II)

Born in Wisconsin in 1905, Leader II is Professor of Industrial Education and Head of the Department of Industrial Education at a midwestern state university. He is married and has three children. He holds three degrees from the midwestern state universities and received his Ph.D. degree in 1936. After holding teaching and administrative positions in the public schools for twelve years, he joined the staff of his present university in 1931. He is the author of several books and bulletins and has contributed short and longer articles to professional magazines. He is a member of the National Education Association, American Vocational Association, American Association of University Professors, American Association for Adult Education, National Association of Industrial Teacher Educators, his state Vocational Association, Wisconsin Valley Industrial Arts Conference, Phi Delta Kappa, National PI Ten, Delta Lambda Sigma, and

Dr. Hign. He has served as president of three organizations, vice-president of one, and secretary-treasurer of another. Areas of specialty include administration, supervision, and methods. Leader E has travelled in the United States and Germany, and his avocational interests are reading, writing, community and social affairs, and horse maintenance.

Leader F

Leader F is Professor of Industrial Arts at a large midwestern state university. Born in 1900 in the state of Texas, he is married and has three children. He holds three degrees from a like number of institutions and received the Ph.D. degree at a midwestern state university in 1936. He taught for three years in the public schools and has held eight positions at institutions of higher learning in the past twenty-six years. He has held his present position since 1938. He is the author of numerous magazine articles and bulletins. He is a member of the American Association of University Professors, National Association of Industrial Teacher Educators, American Integrated Arts Association, American Vocational Association, his state vocational, industrial education, adult education, and education associations, National Education Association, and Phi Delta Kappa. Leader F specializes in professional courses and research. He has travelled in the United States, Mexico, and Canada, and his avocational interests are stock raising and bird hunting.

Summary

An examination of the foregoing biographical sketches reveals that while all of the leaders held the full professional rank, another half of them are designated as heads of administrative divisions. They have held their present positions for an average of 15.46 years.

Average age of the leaders is 35.21 years. They were born in eight different states and one foreign nation. Three are natives of Texas and two were born in Wisconsin. All are married, but the average number of children is only 1.44.

Eight of the leaders held the Ph.D. degree and one holds the M.D. degree. The other three held master's degrees. The average age at which the doctor's degree was conferred is 26.46 years.

The leaders held an average of 8.36 positions in 3-71 years of public school teaching and 3.47 positions in 23-48 years of industrial, arts teacher education experience at the college level. They have written an average of two and one-half books and monographs 1.73. All have contributed a large number of articles to several professional journals.

The twelve leaders belong to an average of 4.71 professional organizations and three professional federations. All have held responsible posts in the organizations. Travel among the leaders has been limited largely to the United States, where it has been extensive. Only three reported travel to foreign countries. There is no uniformity in areas of specialty or in vocational interests, though most leaders

spend a considerable portion of their time teaching graduate courses.

Personalities

A comparison of biographical data concerning the lecturers with that for the profession as a whole will reveal some similarities and some rather startling differences. This material will be presented in tabular form. An attempt will be made here to draw conclusions.

The categories of "Area of Specialty" and "Occupational Interests" will not be included in the comparisons since there are no fixed patterns either for the lecturers or for the members of the profession as a whole.

Age and Experience

As would be expected, the average age of the lecturers is considerably higher than that for all industrial arts teacher educators. Lecturers averaged 44.3 years of age as compared to 31.3 years for the profession as a whole, a difference of 13.4 years. Twenty-six of the lecturers are forty years old, youngest of the entire group, twenty-three. Only three of the lecturers were between forty and fifty years of age, five between fifty and sixty, and four between sixty and seventy. Eight per cent of all industrial arts teacher educators were more than sixty years of age, compared with 13 per cent of the lecturers. Nineteen per cent of the entire group were less than forty-six years of age. 13 per cent of the lecturers were more than fifty.

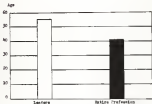


Figure 1. A diagram showing the difference in average age between the selected teachers and the public perception of industrial arts teacher education.

While New York, Wisconsin, and Texas are the active states of 25 per cent of all industrial arts teacher educators, they account for the birthplace of 30 per cent of the leaders. The fifteen states listed as active by 25 per cent of the entire group account for 35 per cent of the leaders. The following is a percentage comparison by state:

Each — leaders, 14 per cent; entire group, 25 per cent.

Illinois — leaders, 31 per cent; entire group, 45 per cent.

South — leaders, 25 per cent; entire group, 24 per cent.

West — leaders, none; entire group, 7 per cent.

Foreign — leaders, 3 per cent; entire group, 3 per cent.

Family Status

All of the leaders are married, compared with 94 per cent for the profession as a whole. However, only 17 per cent of the entire group are children, while 33 per cent of the leaders had no children. The largest number of children for the profession was two, for the leaders three.

The leaders had an average of 1.42 children, compared with 1.24 for all industrial arts teacher educators. One child was reported by 30 per cent of the entire group and by 25 per cent of the leaders. Forty-two per cent of the leaders had two or more children, compared with 31 per cent for the profession as a whole.

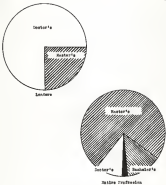


Figure 2. A diagram illustrating the percentage of various degrees held by teachers in industrial arts teacher education and by all members of the profession. Note that industrial percentages with an asterisk.

Formal Education

All of the teachers held advanced degrees, whereas 1.4 per cent of all industrial arts teacher candidates held no degree and 12.4 per cent held only the bachelor's degree. The master's degree is held by 23 per cent of the teachers and by 74.4 per cent of the entire group. The doctor's degree by 7 per cent of the teachers and by only 21.4 per cent of the entire group.

It is interesting to note that five, or 42 per cent, of the teachers received the Ph.D degree from the same university, Ohio State.

The doctor's degree was received by members of the profession as a whole at the average age of 39.65 years, by the teachers at an average age of 38.46, a difference of only 1.19 years. Fifty-five per cent of both the entire group and the teachers received the doctor's degree after the age of thirty-six years, whereas 29 per cent of the entire group and 14 per cent of the teachers received the degree after age forty-five. The range in ages for the teachers was thirty to fifty years and for the profession as a whole, from twenty-eight to fifty-six years.

Public School Teaching Experience

More than a rather large number of the total profession, or 24 per cent, reported no experience in public school teaching. All of the teachers had some work experience. But the average number of years of teaching in the public schools was 7.4 for the entire group and only 5.51 for the teachers, a difference of about 1.9 years.

Seven per cent of the entire group and none of the leaders reported only one year of public school teaching experience. More than five years of experience was reported by 43 per cent of the entire group and 30 per cent of the leaders, more than ten years by 30 per cent of the entire group and 17 per cent of the leaders, and more than twenty years by 7 per cent of the entire group and most of the leaders.

College Teaching Experience

The leaders have been teaching industrial arts education at the college level for an average of 18.3 years more than have all industrial arts teacher educators. Average number of years for the entire group was 4.8 years, compared with 13.08 years for the leaders.

Whereas 33 per cent of the entire group had five years or less experience in the profession, the fewest years among the leaders was twelve. More than twenty-five years of experience was reported by 16 per cent of the entire group and by 73 per cent of the leaders, more than thirty years by .8 per cent of the entire group and 33 per cent of the leaders.

Publications

One or more books have been written by only 11 per cent of all industrial arts teacher educators, compared with 53 per cent of the leaders. While the leaders were authors of an average of two and a half volumes and co-authors of an average of one and three-fourths

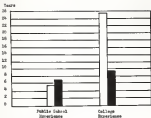


Figure 3. Bar diagram comparing average number of years in public school and college teaching for the selected leaders and all members of the profession. Leaders are shown in white, the entire profession in black.

volume, the average for the entire group would be less than .1 of a volume.

All of the leaders contributed a large number of articles to a wide variety of professional journals, while one or more articles were contributed by only 17 per cent of the profession as a whole.

Organizations

All of the leaders and 38 per cent of the entire group reported membership in the American Vocational Association. The American Industrial Arts Association was represented by 66 per cent of the leaders and 34 per cent of all industrial arts teacher educators. Thirty-three per cent of the leaders and 26 per cent of the entire group were members of the American Council on Industrial Arts Teacher Education, while 33 per cent of the leaders and 38 per cent of the profession were members of the National Education Association.

It may be of interest to note that five, or 61 per cent, of the leaders were members of the Mississippi Valley Industrial Arts Conference, represented by a negligible percentage of the profession as a whole.

Membership in Phi Delta Kappa was reported by 31 per cent of the leaders, compared with 39 per cent of the entire group. Forty per cent of the entire group and 66 per cent of the leaders were members of Sigma Xi Inc.

Leaders listed forty-three different professional organizations

and nine federations, compared with more than fifty organizations and twenty federations for the entire profession.

Travel

Forty-seven per cent of all industrial arts teacher educators reported travel beyond the boundaries of the United States, compared with 35 per cent of the leaders. Only 25 per cent of the leaders, however, travelled beyond the boundaries of North America. Three-fourths of those who reported foreign travel among all members of the profession had gained the experience through service in the armed forces.

Summary

There is little difference between the leaders and the profession as a whole in terms of birthplace, marital status, age at the time of receiving the doctor's degree, membership in the National Education Association, general breadth of organizational affiliation, and amount of travel.

There is some difference between the two groups from the standpoint of average number of children, those having two or more children, teaching experience in the public schools, and membership in the American Council on Industrial Arts Teacher Education and Spelling 11 Test.

The leaders show a marked difference from the entire group in terms of age, those having no children, those who held master's and

Author's degree, those having no public school experience, number of years of college teaching experience, number of books and articles written, and membership in the American Technical Association, American Industrial Arts Association, and Phi Delta Kappa.

CHAPTER V

THE APPLIED FUNCTIONAL RELATIONSHIP

Leaders work with ideas. This is equally true in any field--politics, business, religion, or education. The student of leadership who writes of "concepts," "insights," "problems of association," and "creative processes" points directly to the realm of the idea, be it borrowed or original.

Robert Schlegel on the idea of a super-race; Gandhi led his millions on the idea of passive resistance; and Franklin D. Roosevelt was elected on the idea of a new deal. The whole march of western civilization has been based upon an idea of freedom, despite the fact that the concept of freedom has not remained static. There is no challenging the power of the idea.

Now, our study of leadership in a specific situation must be concerned with ideas. In a professional organization of individuals, the guiding ideas are that in with the objectives and problems which brought about the organization of the group and sustain it. They either sustain the organization into vigorous health--or drive it to death.

The Internal Idea

It was pointed out in Chapter I that this study would be concerned with the ideas of leaders and of a cross section of the profession. On June 3, 1952, a letter (Appendix III) was addressed to each of the

selected leaders, explaining the plan of the study and requesting a list of "those problems facing the profession, which you feel are most urgent." The leaders were also asked to state briefly how each problem should be approached. A similar letter was mailed to an equal number of industrial arts teacher educators selected haphazardly from the directory in Yearbook I of the council.

The first letter directed to the National leaders brought nine replies. A follow-up letter (Appendix XII), mailed on August 14, 1938, resulted in ten replies; and a final letter, mailed October 1, 1938, brought six results. This chapter, then, will be based on the replies of eleven leaders--all of whom included in Chapter IV with the exception of leader 6. Replies of the control group will be treated later.

The reaction of leaders varied from a brief letter, written in longhand, to several thousand words of typewritten material. This was undoubtedly a result of the general nature of the request, but it was believed that any qualification of the request would influence the reaction and thereby decrease its weight.

The problems expressed by each leader and his proposed solutions will be treated in his own words.

Leader 1

Problem 1/

Though there is no considerable agreement in industrial arts concerning the over-all departmental plan (and specific course plan),

we need much systematic study concerning which of these aims apply with greatest force to:

- a. The several areas of industrial arts.
- b. The societal common bearings of the junior high school and those special-interest bearings of the senior high school.

a. The industrial and handicraft activities significant to both boys and girls (jointly or segregated), and those which are applicable essentially to boys.

- i. The industrial arts program for adults.

Synopsis

Institutional research, state department and state professional organization study, and community trial and experimentation followed by good reporting. National professional organizations in industrial arts could lay out numerous studies which are needed and give direction and assignment to help prevent overlapping of efforts.

Table 2

There is great need for clarification of marginal areas of industrial education which are neither common or special-interest bearings of industrial arts on the one hand, or shop-trade vocational industrial education on the other. Reference is made particularly to general industrial education in senior high schools for a degree of versatility in a family of trades. The industrial arts teacher (with adequate occupational experience) and the facilities of industrial

arts are frequently used. The chief aim of the instruction is thereby a form of occupational preparation. Frequent labeling of such instruction would clarify the thinking of educators in both fields of industrial education as well as those in general education.

Conclusion

This problem probably should be attacked at the state level. Increase of state involvement in vocational education, enforcement, study and experimentation by committees of state officials, local industrial education leaders, and qualified instructors in industrial arts and vocational industrial education might serve as, agencies, and public policies.

Conclusion 2

There is a need for unity of forces in industrial arts in the United States in their presentation, with a degree of authority, can be made when necessary. The recent uncertainty of representation of opinion on a national committee to establish criteria for study and upgrading of industrial arts teacher education institutions is an example of lack of unity in leadership.

There is ample room for more than one national professional organization. There is room for but one national professional organization. If there are particular interests of small groups, these should not get in the way to unity. Twenty-five or thirty thousand industrial arts teachers should undoubtedly have an identified national organization.

Interchange

The American Industrial Arts Association has the framework of an extensive national organization. The American Vocational Association and many of its long-time members have promoted, directed and actively taught industrial arts at state and local levels. There is great and sometimes long-time loyalty in both organizations. Would a proposal by the American Industrial Arts Association to transfer its present extensive organization in the National Education Association to the American Vocational Association, in limited constitutional eligibility, be accepted? Some friends of industrial arts in both organizations believe such a proposal would be accepted. Such a proposal would, if either accepted or rejected, help to clear the present intolerable situation. The American Vocational Association was formed in Louisville twenty-seven years ago, in a not greatly dissimilar manner, of the National Society for Vocational Education and the Vocational Association of the Middle West.

Conclusion 2:

We need an understanding in the case of certain creative, occasional handicrafts. In recent years some of those in fine arts education have been incorporating more and more of the occasionally creative handicrafts into their offerings in occasionally and representatively creative fine arts. Teachers prepared in industrial arts are very generally not qualified to teach the fine arts, and it is quite obvious that most fine arts or 'art education' instructors are

equally equipped to teach creative expression in work involving trade and industrial techniques and applications. To some extent there is similar over-staying of subject areas by some teachers of home economics, but this does not seem to be an critical because many of the materials and phenomena here are normally associated with home economics.

Summary:

Joint committees of teachers' associations in the two areas, state department leadership, and state teacher certification regulations are agencies with which to attempt to solve this problem before it becomes unpleasant and harmful to teachers and to education.

Two superior results from instruction in certain activities experimental materials through industrial arts can provide the career student without consultation and consultation.

Problem 2:

The materials status of handwork or industrial arts in elementary education is lamentable, and an unhappy reflection of lack of interest, study and effective organization on the part of those in both areas of education. There is uncertainty of the stated purpose or purposes of handwork in the first six school years, of correlations, of training of teachers, of who should teach, of what should be taught and of school and classroom organization for effective use of learning through doing as an adjunct of the educative processes in these school years.

Solutions:

Collegiate and public school study and research by parents and groups representing both industrial arts and elementary education, working independently and jointly, might help to solve this problem. The agencies in the National Education Association or in the United States Office of Education, which represent these two areas, might undertake studies through cooperation. This is not a difficult problem because the industrial arts program are service-type organizations, either directly with children or indirectly through the classroom teacher.

Point 1

Problem 2:

The instructional content in industrial arts.

Solution:

Basically, I believe that industrial arts is taking good direction. Most persons in leadership believe that there is instructional content in industrial arts just as in the practical competencies out in the world, and most industrial arts is taught that way--coupling of the competencies, if you please. There are a few persons who think it recognizes the relationship of industrial arts to competencies of competencies in the world's work. Industrial arts would have little genuine value if it did not represent work opportunity.

Section D

The role of the analysis technique in industrial arts.

Answers:

There are those who believe that the analysis technique has no place in industrial arts. The majority of persons, however, are of the opinion that it makes a significant contribution to system construction in industrial arts. Its influence is no way with methodology or philosophy. It puts system and organization into the industrial arts shops. Finally, I do not see this as a major problem, but perhaps it should be continued. Quite often we are thoughtless in our application of philosophy in college and university classrooms and forget the practical problems met in the public schools.

Section E

The role of industrial arts in the upper secondary school.

Answers:

Industrial arts in the upper levels of high schools should be of occupational nature. When a person graduates from high school, he should have salable abilities. The abilities will not be salable if they do not represent the real work world. Here again, organization of instruction and methods of instruction would be factors in the success of such a program. I am not sensitive of a person taking a semester or two of machine shop in senior high school without having

had real practical instruction and experience so that he could go out and work in consequence of that instruction. Anything else would be mere "lecturing" and would not have guidance value.

The above points in no way conflict with modern ideas relating to the present attention value of industrial arts, which of course is the trend that industrial arts is taking.

AIMS I

Problem 1

The object of the basic analysis procedure is determining industrial arts content.

Summary

In nearly every state course of study, in our corresponding textbooks and in our pupil-text textbooks, the job or occupational or trade analysis procedure dominates. I do not see how we can go far in lowering the instructional content of industrial arts until we reach valid job analysis and use a structured change procedure based upon an analysis of objectives.

The teacher-oriented version of 1933 or shall teach and 1935 or shall teach still continues to be a version as long as we have a dynamic industry, changing concepts of human development, a liberative way of life, and objective-oriented industrial arts teachers.

Industrial arts will make adjustments to new curriculum demands or run the risk of being supplanted by a program which can more closely

points attention to the needs of our people. The similarity and directness of the traditional trade and/or job analysis procedures are inviting virtues. But today, an industrial arts program, like any other class of general education, requires the interests and activities of a variety of features which bridge upon the curriculum. We must be concerned not only with materials, processes, and operations of a variety of the arts of industry, described as they are... we must be able to offer a fundamental education which takes into account the problems, interests, and values of children and youth, the community framework in which the pupils are reared, the unique characteristics of an industrial culture, and the human values which are basic to the democratic way of life.

Exhibit 2:

The social labor-education synthesis, suggested by Lewis, Richards and Taylor, has not made much impact.

Exhibit 3:

By 1932, we have still done very little to introduce industry into the industrial arts program. It is conceivable that a crafts, home mechanics, or a shop program intended for the orthopedic handicapped or for those with handicaps, may well emphasize construction activities alone. The implication seems equally obvious that industrial arts, having its origin in industry, should be concerned, as Lewis said, with "the changes made in the forms of materials to increase their

values" and also with "the problem of life related to these changes."¹

The "social instrumentalism" concept has been one new departure in the field of industrial arts. The first idea for this departure may be credited to John Dewey with the initial conference dating back to the last decade of the nineteenth century.

Dewey, having the advantage of living in a nation which had become highly industrialized after the Civil War, sensed the complexity of human interrelationships which had accompanied the basic social-economic changes. Furthermore, Dewey had recognized the need for providing the behavior to be learned and had, therefore, made social discipline a necessity. In brief, Dewey visualized new functions to be served by work with tools and materials and he made this vision a reality by incorporating it in an educational program.

Dewey explained the reasons behind his plan when he said:

We must recognize of work in work and social, of working, saving, and making, as activities of living and learning, not as distinct studies.

We must recognize of them in their social significance, as types of responses by which society keeps itself going, as agencies for bringing home to the child some of the varied associations of community life, and as ways in which these needs have been met by the growing insight and ingenuity of man; in short, as instrumentalities through which the school itself shall be made a genuine form of active community life, part of a plan set apart in which to learn lessons.

¹Frederick A. Jones and Lois Jeffrey Wilson, Industrial Arts for Elementary Schools, p. 2. New York: The Macmillan Co., 1928.

²John Dewey, School and Society, p. 11. Chicago: The University of Chicago Press, 1900.

A few years later, in 1904, Charles E. Richards presented the case for a change in name from "manual training" to "industrial arts" and in so doing cited psychological support for a change in method and sociological support for change in point of view. James H. Rowell, in 1909, urged "the study of industries for the sake of a better preparation on man's achievement." Frederick S. Benson was a vocal advocate spokesman for the social interpretation approach. His definition of industrial arts has had wide circulation and with various modifications appears in numerous state and city bulletins. However, the fundamental change in viewpoint which the definition assumes has been wide stopped or disregarded in many instances.

Nevertheless, the social interpretation and inquiries furnish a top priority challenge to the profession. Conditions outside the school increase the pressure on those who continue to teach as if social and economic conditions of today are simply reflections of the 1900 era.

Problem 2:

There is confusion caused by the neglect to distinguish among the different types of shop programs such as art crafts, manual arts therapy, specific trade trainings, adult evening programs, practical work for the orthopedic handicapped, and industrial arts. Sometimes this confusion is intentional; in other instances, the people simply do not know any better.

Section 2:

Terminology stands in the way of clear thinking. If now we have used the terms like exploration, orientation, and assessment twice until they have become obsolescent. It is not that there is something basically wrong with the terms. Rather, the indigestibility has been prevented clear thinking. Obviously the term exploration should mean something different than having youngsters pass variables through a series of teacher planned projects in two or more days' work.

But professionally we have reached an almost automatic response: exploration means a variety of animal experiments rather than a process to be learned as one approaches something new.

Section 3:

Our materials of instruction are not in several respects

a. Many pupil texts are written by persons not qualified in the field in which they write. One author, for example, has written books, many of them oriented in shape (contouring, exercises, etc.) wherein he has no first-hand experience. One can go from the lips and find inconsistency after inconsistency. It is difficult to guarantee respect for our professional work when the student references are lacking in scholarship.

b. There is no balance in our writing materials. Even though we have an abundance of uninteresting books, most poor or old more uninteresting texts than any other.

3. The books written follow a uniform pattern: construction of process instructions and project plans. In some books or making of the industrial interpretation type.

4. At the teacher education level, the authors and publishers, in the interest of common sense, have endeavored to write books which cover industrial arts and vocational industrial literature. These books have reached the young men in undergraduate and graduate programs.

Section 6

Just as we want to delineate between industrial arts and vocational industrial education, we want likewise to clear up the boundaries with the physical sciences, the social sciences, and art. Perhaps the last mentioned one is the most pressing. Several big industrial arts departments (e.g. Teachers College, Columbia University) have come under the jurisdiction of art people. Cities and states are likewise veering in that direction. Philadelphia is a case in point. Also, at the time of Huntington's appointment to the U. S. Office of Education, the plan was to appoint one person to represent both art and industrial arts.

Furthermore, some curriculum development people would lump all the "arts" together under the heading of expressive subjects. There is an instance of a partial statement of a much more comprehensive truth.

Problem 2

Security relationships are still unsettled. On the one hand, we have the security study technique in the pattern of the trade and industrial survey. On the other hand, we have instances of studies with sources which ignore the local circumstances completely. In a professional group, we need to work out what this relationship shall be.

Problem 3

Education is new and has been a neglected area. For the most part pupil appraisal tends to be a project grading affair with the teacher giving the grade. It won't be feasible to teach for broader purposes until we start giving weight to these additional purposes in the evaluation process.

Problem 4

The greatest attention has centered upon the junior high school level. When elementary school programs have been projected, the programs have been downward extensions of the junior high offering. In a similar manner, senior high programs have tended to be much like the junior high offering with the projects a little more complex and sophisticated. This is the old curriculum problem of scope and sequence.

Problem 5

Research has been neglected in many areas. It is not my belief that the "scientific" study of our problems alone will lead to

variable solutions. But there are places where systematic research will help. We know very little about the development patterns of children and youth in so far as industrial arts instruction is concerned. For example, what are the characteristics of orthographic, mind-eye projection or isometric efficiency?

Problem 11:

The preparation of industrial arts teachers is a source of much of our difficulties. It is almost needless to say that these teacher preparation programs are and have they differ in quality. But there are some continuing problems regardless of qualitative differences. Our universities are for the most part overly strong, technically speaking. But their backgrounds in terms of educational perspective and in terms of their understandings of the learner leave much to be desired.

Problem 12:

In the operational level the ubiquitous source of difficulty is the unarticulated role of those who operate the vocational industrial program. Supervision at the city and state levels too frequently lies in the hands of trade and industrial people. This prevents keeping the industrial arts program specific, and it is operated as a pale carbon copy of the vocational offering.

Project 2

Problem 1:

How to convert institutions' teaching and maintenance of new departments of industrial arts teacher education in schools where reasonable financial resources do not exist for furnishing a minimum of facilities for a successful program and where often no demand exists for additional teachers for the general area served. Such programs are often based on institutional rivalry and political maneuvering.

Suggested:

a national study (could be a doctoral dissertation) under the guidance of an association or combination of associations covering existing conditions in all states--number of institutions and variety of institutions now offering programs and how many teachers are absorbed annually. The study could be the basis for a bulletin issued by the sponsoring association or associations, presenting facts to various state departments of education, teachers associations, etc. Such factual material might dispel the idea of regional college services here as it has done for medicine, dentistry, law, and other programs.

Problem 2:

to what extent does the particular mode of acquiring staff skills affect future teaching procedures? Is it true that persons will teach

as they are taught? If that is true, how could a person who has gone through an apprenticeship program ever become a good teacher? In other words, may a person acquire craft skill by intensive application in trade or craft shop classes and then learn to teach by taking professional courses and student teaching and also be better skilled in the doing phase of the work than if he got his skill in comprehensive general shops or laboratories?

ANSWERS:

A controlled study of teaching success of graduates who have finished four year programs only three colleges chose each of the procedures in work. This would include philosophy supervised, satisfactory skills, rating by administration, etc. Also, comparison of teachers after some years of experience.

Problem 3:

Does type of student teaching program leads to the best initial performance by beginning teachers?

ANSWERS:

Similar to suggestions for Problem 2.

GRADE 8

Problem 4:

An Orientation Program--Goal of Industrial arts orientation for all youth providing a broad introductory overview of technology. Such an orientation, preferably scheduled during grades eight or nine,

should provide a number of appropriate laboratory experiences leading to an understanding of various media (e.g., wood, metal, drawing, plastics, handcrafts, etc.). The underlying purpose of such programs is to provide a pupil with information leading to a degree of competence as essential in present-day living. These programs are neither society in action and provide a base upon which specialization may later be built. Such orientation offerings are necessarily broad in scope and rich in the study of related materials, media-related with and industrial and community relationships.

Summary

To accomplish the above will not be an easy task. The problem of orientation will need to be approached as a broad front, involving general agreement on the part of industrial arts teachers as to the appropriate scope of an adequate and necessary industrial arts offering for all pupils. A point of view and acceptance of the task must be held by teacher education, supervisors, and administrators. Instructional materials must be developed to focus on this task. Particular emphasis may be given to the orientation of an industrial arts orientation concept by an active state supervisor or consultant in the area of industrial arts education.

Section D

Industrial Arts in the Small School. A pressing need for industrial arts programs exists in the small school. Given out of

every ten secondary schools enroll three hundred pupils or more; and these are, as a group, the schools with the least industrial arts opportunity. Nevertheless, distinctive examples may be found among these schools of low enrollment which indicate programs may be found to sweep and risk in institutional problems. The period ahead will undoubtedly reveal a great acceleration of this trend.

Summary:

The necessary attention required in the accomplishment of the above will be slow. Representations of general education as a group have not stated the possibilities of industrial arts for all youth as a necessity and educational right. Movement in technology is accelerating the trend of increased production and consumption. Equals industry, reflecting the obvious benefits of industrial arts, coupled with sound public relations on the professional level, should be used to expand the effectiveness of such programs.

Outline I

Outline 1:

The encouragement of worthy high school graduates to become interested in the industrial arts teaching profession.

Outline 2:

Extensive cooperation of industrial arts teachers and of senior students in our teacher education programs to conduct marketing

high school graduating seniors, and to discuss frankly and constructively the merits of our profession.

Problem 2:

Definition of outstanding contributions and agencies in the interests of professional improvement for industrial arts education.

Remarks:

Creation of a National Advisory Council consisting of representatives of these contributions and agencies. Such action has been proposed.

Problem 3:

Standardization for accreditation of industrial arts teacher preparation departments. Our profession should have a certified agency responsible to the various phases of engineering to regulate teacher education programs.

Remarks:

The present committee studying certification standards would be the logical group to pursue the subject further and make recommendations for the solution of this problem.

Lesson II

Problem:

The role of industrial arts in general education.

Summary:

I believe that industrial arts, as a share of the total program of education, will receive even more attention in the future than it now receives. There are some dangers in the present situation that in my judgment tend to obscure the educational value of this work.

I have in mind chiefly the emphasis on freedom on the part of the student at the expense of the careful planning and the maintenance of high standards of achievement. In considering the necessity of creativity on the one hand and careful development and self-discipline, skill, and accurate knowledge on the other, I do not regard these values as contradictory.

Many of us who have been teaching for many years have taken for granted both sets of values. I believe that in the near future our teachers will again come to the point where they will stress organization, skill, and technical knowledge without sacrificing freedom of action or creativity.

Appendix I

Problem 1:

The Need for Leadership in Industrial Arts Education.

Summary:

Historically, industrial arts had had few lifetime champions. Because its interests were divided with elementary education, and because it was untheoretical. Other accepted leaders have left industrial

arts work. Several contemporary kinds of teacher education departments in our universities are attempting to combine industrial arts teacher education with vocational industrial teacher preparation. In a few great schools, separate departments of industrial arts education are maintained with more or less success. The greatest need of the profession of industrial arts teaching today is a group of nationally recruited teachers. In the teachers colleges, there are many problems as well as progress and of progress. Because of differences in educational philosophy as well as of possibly both, no one individual is credited with national leadership. The future is bright for the lone young man who expects to lead the nation of industrial arts teachers out of a wilderness of diversified activities into a cohesive national organization.

Section 2

Fundamental Textbooks in Industrial Arts.

Summary

A stated need in the field of industrial arts is a wholesale deluge of books on philosophy, methods, organization, school shop planning, design, and administration. With only one recent book in a line of three across our nose in rivers, the need is acute. Again, the production of these books would develop leadership, unify the thinking of industrial arts teachers, and tend to professionalize the teaching of industrial arts.

Problem 14

The Need for Research.

Summary

The need for research is evident and the need for printed reports of research projects is even more urgent. A professional services and sales program is almost proportion to completed research investigations. Experimentation and investigation based on research techniques will provide the basis for advancing the profession.

A corollary to the fact that more Ph.D. degrees are granted in the field of industrial arts education. This will result in a greater volume of research applied to the specialized problems of teaching industrial arts. The leaders of our profession should try to secure the inclusion of the advanced industrial arts degree in more universities.

Problem 15

State Supervision of Industrial Arts.

Summary

While the need for centralized state supervision of industrial arts programs is not questioned, the practical problems of its institution must receive very careful consideration. Industrial arts as a phase of the school curriculum is so different from all other school subjects, that its supervision must be informal or control by other agencies. Since industrial arts is concerned with the

general education of all children and youth. The opportunities must not be limited by confining it to one phase of education. Industrial arts for all elementary school children, for all boys and girls in junior high school, and for a large majority of high school boys and girls should be the ultimate goal.

Principle 2

Local Supervision for Industrial Arts.

Approach

In the organization of a city system of schools, supervisors should be assigned for each special subject. When a school or a system has two or more teachers of industrial arts, one should be named the supervisor. In larger cities where programs of vocational industrial education systems or trade schools are operated, there should usually be two supervisors, with one having the title of director of industrial education. In a day of extreme specialization, a director of industrial education can not be equally well prepared or tactfully disposed to supervise both trade classes and industrial arts classes. Adequate supervision of industrial arts instruction by qualified supervisors should be skillfully realized.

Principle 3

Full Certification Education of Industrial Arts Teachers.

Proposed:

Within a decade, practically all industrial arts teachers will have earned master's degrees. What program of education should be provided for the year of post-master schooling? If the master teacher concept is adopted for the graduate period of training, industrial arts teacher education departments should offer many courses in crafts, design, carving, jewelry work, etc., as well as arranged courses in the usual industrial arts subjects. Specialized courses in visual aids, projected pictures, outlines, curriculum construction, and related professional subjects should also be offered. For those graduate students who plan to work for a Ph.D. degree, the standard program of graduate courses must be pursued to the master's level.

Problem 2:

Membership in Associations.

Proposed:

Every teacher should maintain membership in local, district, state, and national associations. Through reading the official publications of his associations, he can perfect himself in an understanding of the aims of his group.

He should also attend meetings. What could happen if a national association for industrial arts teachers could meet during the summer vacation period? Would more classroom teachers be so stimulated?

Could we say that no teacher should have taught any two-year period without obtaining a national certification of industrial arts teachers?

Problem 2

The Role of the Industrial Arts Teacher in the Guidance Program.

Answers:

Guidance is an essential aspect of the education of youth. If guidance could be "integrated" in all courses and classes, the problem of young people relating to the selection of adequate programs of educational preparation and fields of life activity could be simplified. In a segment of the integrated program of guidance, industrial arts courses and classes have a significant place. Every boy or girl enrolled in an industrial arts course is exploring his interests and capabilities with reference to the materials and processes included in his course.

Each industrial arts teacher should be an intelligent guidance worker in that he should have completed one or more college courses in guidance. His guidance work may well be of an informal type.

Problem 3

The Need for New Type Programs of Industrial Arts Instruction.

Answers:

The new type industrial arts program includes a series of shop-work subjects rather than an extensive experience in a single subject.

most commonly woodworking. This change has been realized in large city schools because of their ability to purchase new and varied necessary equipment. This can not be said about smaller cities. There are 4,437 cities in the United States with a population between one thousand and five thousand. In each of these cities, an industrial arts department is a possibility.

For professionalizing industrial arts teaching in these small teacher situations, a new step must be proposed--the Community Shop. This place in the school building or on the school campus would contain equipment representing from ten to fifteen industrial arts subjects. With adequate equipment, the needs of the youth in the community for structured work experiences could be met. The teacher would apparently be a master teacher with current work in all of these industrial arts subjects. He should serve the industrial education needs of the community much as the vocational agriculture teacher serves in the agricultural systems of the school community. He should conduct night classes for adults at least twice each week. For this, he should receive extra compensation and he should be relieved of a portion of his daytime duties. It will also require part-time employment of the industrial arts teacher.

Chapter 2

Problem 1:

The problem of finding industrial arts from the influence and dedication of vocational education. This is particularly serious in

the states where all of the supervision from the state level is done by vocational representatives.

Conclusion

1. Assignment of industrial arts to the department of secondary and/or elementary education in the state departments, and appointments of state and local supervisors who are sympathetic to industrial arts rather than vocational education.

2. Continue objection to the term "Industrial education" which artificially unites industrial arts and vocational education under one title.

3. Stress the importance of complete separation of industrial arts and vocational education at the teacher education level. No single department can adequately prepare teachers for both fields, and the tendency seems to show that vocational education holds the favored position in most such departments.

Problem 2

Acceptance of industrial arts by general educators as a significant part of general education. It is my feeling that whereas such general educators will give lip service to industrial arts, they tend to look upon it as a means of holding over of those individuals who can not profit from the ordinary academic school program.

Appendix:

a. Fortunate and well written articles by members of the industrial arts profession in periodicals read by school administrators.

b. Collations by industrial arts teachers to examine the responsibilities of other teachers in the general education program such as homework, club membership, etc.

Exhibit B:

Acceptance and implementation by the industrial arts teaching profession of the idea of enrichment and breadth of experience as opposed to limited and intensive training. We still have a long way to go before the general shop or laboratory of instruction is completely accepted and put into practice.

Appendix:

a. Teachers colleges and teacher education departments must impress on new teachers the full significance of the exploratory concept, and must exemplify this concept in their programs.

b. New teachers must be prepared in a variety of areas and must have experience in working and teaching in situations requiring activities in many areas simultaneously.

Exhibit B:

Emphasis of teacher change as important outcome of industrial arts rather than the mastery of subject matter or the acquisition of skills.

CONCLUSIONS

a. Expressed by teacher education departments as the definition of objectives in terms of behavior changes, and fundamentally as the train analysis approach to the selection of subject matter.

b. Presentation of courses of study for the public schools in terms of behavior changes. e.g. the Denver, Colorado, Institute recently published under the title, Industrial Arts Education in the Denver Public Schools.

APPENDIX IPrinciple 1

Industrial education, in both its phases, must proceed on the assumption of major need and value as parts of a total educational program. Better integration is indicated and could be obtained much more rapidly through consistent orientation of those holding and in held administrative positions.

Principle 2

It seems more important that we strive for consistency and uniformity of such of the so-called "specialized subjects" in the total program than that there be differences among them.

Principle 3

On-the-job education should become increasingly more specific and industrial arts increasingly more general, in keeping with their related yet distinct purposes.

Principle 10

Industrial arts instruction should be more broadly prepared and trade instruction should be subject to more intensive professional training.

Principle 11

Industrial arts content should be made progressively more difficult with advancement through the secondary grade levels, in both the informational and manipulative aspects.

Principle 12

There must be great expansion and improvement of our work in the elementary grades.

Principle 13

Observation and student teaching should be greatly strengthened and should be made to apply more in the field of trade teaching.

Principle 14

More supervisory positions may well absorb almost half of the casual type and more of regular effectiveness will be teachers in service and conference and to local supervisors.

Section 4Principle 15

The matter of recruiting, properly training, placing, and retaining well qualified teachers.

Summary:

This problem involves, of course, higher salaries for teachers and a more realistic recruiting program than we have had. It involves also a reorganization of our teacher training program and the modernization of our facilities in many places.

Problem 2:

Providing effective supervision of industrial arts on the state and local levels.

Summary:

In my judgment, this should be combined with supervision of trade and industrial education, both on the local and state department levels. To do otherwise puts the two phases of the program against each other in a direct controversy.

Problem 3:

The consolidation of our professional organizations in the field of industrial education.

Summary:

There is, in my judgment, no reason for having an industrial teacher education group in the American Vocational Association and another parallel group in the National Education Association. The solution to this problem involves, first of all, a goodly amount of money spent and the willingness to reexamine the true relationships

between industrial arts and the vocational curriculum.

What the profession needs is some leadership that will get the two groups together. By reaching out to the middle, people in industrial education union their organizations and make themselves less vulnerable to the aims of outsiders.

Problem 2

The education of industrial arts does take the elementary school and spread into the high evening school.

Problem 3

These problems, of course, involve teacher education and the mismanagement of teaching staffs and classroom facilities.

The Control Group

The first letter requesting a listing of the problems facing the profession, similar to that sent to the leaders, was mailed to the control group on June 20, 1938. This letter brought only a single reply. A second letter was mailed on August 11, 1938 and resulted in two replies while a third, dated October 2, 1938, brought out more replies.

Only four replies from a total of thirteen industrial arts teacher educators in the control group were received. It was decided that to increase the number would change the representative aspect of the group. In other words, had letters been sent to a sufficient number of teacher educators to secure the same number of replies

received from the leaders, the control group would then become a special group representative only of those leaders of the profession who had a particular interest in national problems or in contributing to the study.

Replies of the control group will be treated similarly to those of the leaders.

Problem 1

Problem 1a

There exists a lack of uniformity in teacher training programs.

Statement

Each institution in our state goes its own way in planning its industrial arts program. As an example, drawing requirements vary from a minimum of six quarter hours to a maximum of forty-two quarter hours in different institutions. There are other differences that need at least some standardizing. I do not imply that there should be a set pattern, but surely they can be brought closer together than they are now.

Problem 1b

There is a definite lack of understanding on the part of public school officials and the people of the various communities in which industrial arts programs exist.

Answer:

We are glad we can tell ourselves for this. Each student who prepares to teach at our institution is made cognizant of this fact and is encouraged to educate his community concerning himself and his objectives in the shop. The fact still remains that many of our student people, even our college professors of education, have distorted views concerning any sort of shop program and resist any effort on the part of shop teachers to change their views.

Question 2:

How can we encourage young people to qualify to teach industrial art?

Answer:

I do not intend to say that we have a shortage of students here. There are approximately sixty industrial arts majors in residence and we graduate twelve to fifteen annually. Of these, we seldom are able to get more than five to take teaching positions. The remainder are attracted by the higher salaries paid by industry. The five who teach annually are not our best students. Of course, salaries play a big part in this problem.

Question 3:

Lack of supervision and assistance for the young teacher on the job.

Problem 1

This problem is peculiar to those states in which there is no full-time department of industrial arts. These jobs usually are filled with vocational teachers, both on city and state levels, and the supervisors spend most of their time on the vocational programs. I know of no place in this state where a young teacher is assisted in planning his shop, getting equipment, or in planning instructional materials. The teacher training institutions give as much assistance as possible to their own graduates, but this is not adequate to meet the need. Full-time supervisors could do the job, but as far as the state department of education has realized all efforts to have this done.

Section 2Problem

A good industrial arts teacher should not only be a master of his art and a good teacher; but he should also have, as a background, considerable actual experience in the exact subjects he proposes teaching.

Section 3Section 1

The fundamental problem of our profession, and its prime goal, is the presentation of the materials and methods of modern industry to every boy and girl in the schools.

Summary:

This can be accomplished to an increasing degree through the national organization of principals and also our national leadership. The American Industrial Arts Association and its branches, along with other national organizations, are doing much to solve this problem.

Problem 2:

There is a shortage of competent industrial arts teachers.

Summary:

The problem of finding competent, energetic, and professionally progressive teachers rests on our teacher training institutions. Here, again, national organizations will serve to bring representatives of these institutions together to exchange ideas, discuss valuable research, and develop the all-important principles which guide us in our profession.

Problem 3:

The "general teaching" idea of industrial arts to which many educators still hold.

Summary:

Educational publications and conventions are changing this conception to the true conception of modern industrial arts which places it as an important part of general education.

Chapter 2

Purpose

Requesting elementary school teachers to use the Industrial Arts as a means of vitalizing the elementary school curriculum.

Summary

If the profession is ever to extend the Industrial Arts into the lower elementary grades, elementary school teachers need to adequately prepare for such work. This can best be done by establishing adequate programs of teacher preparation, extension, and in-service instruction. This calls for teacher preparation institutions to re-examine seriously their program of Industrial Arts for the preparation of elementary teachers.

Summary

The eleven teachers considered in this chapter have presented a total of thirty-two problems facing Industrial Arts teacher education. Duplication occurred in only twelve instances, leaving the number of separate problems at thirty-seven. Five of the problems were mentioned twice and three were listed three times.

There is considerable overlapping within the thirty-seven separate problems; yet each presents an identifying quality which separates it from the others. A three-way controversy among advocates of Industrial Arts as a part of general education, of vocational Industrial training as special education, and of Industrial education

as a continuation of the fact is evident in many of the problems under consideration. This question will be treated in greater detail in the concluding chapter.

Scatter ratings from the control group indicate thinking along the general lines revealed by the leaders. Of nine problems listed by the four members of the group, only one was not mentioned by the leaders. Two of the nine problems were concerned with requirements of international law leaders, but each of the others was a separate problem. Probably the most striking characteristic of the control group was the lack of response.

CHAPTER VI

FORMAL AND CONCLUSIVE

In the fresh realm of the march of progress, there has ever been an increasing interest upon organization in human affairs. The degree of organization tends in proportion to the expansion of business and government, the advancement of science, and the growth in population.

In a sense, the progress of living becomes more and more complex. Today, man spends most of his time in group activities of one kind or another. Organization has been organization, until the primary forms of mental research has been forced away from the individual to problems of association and interaction.

In a democracy, the success of a group is attending its objectives depends not so much upon command or executive direction as upon the quality of leadership displayed within the group. Leadership, then, implies something more than command and/or executive administration. Definitions of leadership have varied away from concentration on the personal qualities of the leader, though these remain important. toward a consideration of the situation in which leadership functions and of interaction between the leader and the group. Attention is fixed upon means or goals and the results of leadership within these who are led.

Leadership may be conceived as both an "art" and a "science." The leader works with human material, applying imagination, vision,

and technical skill to the organization of time, in order to attain his and the group's objectives.

A single study of leadership must of necessity be confined to a limited area of investigation. This study has been limited to an investigation of particular components of leadership in industrial arts teacher education. It springs from an interest in the American Council on Industrial Arts Teacher Education, organized ten years ago under the sponsorship of the American Industrial Arts Association.

It seems evident that if the council is to succeed in its stated aim of bettering industrial arts teacher education, it must be continuously concerned with the development of leadership. Concrete issues in the areas of philosophy, curriculum, method, and personnel have been raised within the council; and the resolution of these issues will demand strong, able leadership in order to derive cohesive action from the profession as a whole.

This study has obtained the picture of leadership in industrial arts teacher education through an identification of the leaders, a brief investigation of biographical data concerning the leaders, and an examination of their views with respect to critical issues facing the profession. The steps are set for the study by Paragraph I of the council, entitled Inventory Analysis of Industrial Arts Teacher Education Institutions, National, and Structure, and by Paragraph II, What's the Is Industrial Arts Teacher Education.

This study does not pretend to solve all of the problems of leadership in industrial arts teacher education. Its limitations have been stated, and it is offered in the spirit of "pointing the way," a matter of general studies of leadership, published in the last few decades, have been of great assistance in determining the direction to be followed here.

Background of The Survey

Yearbook I describes the physical setting for the profession. It reveals that 1,618 individuals were employed half time or more in industrial arts teacher education in approximately two hundred institutions of higher learning within the United States during the year 1954.

Industrial arts teacher education is a growing profession, with a 47 per cent increase in personnel in the decade 1944 through 1954. The average department is staffed by five faculty members who serve about one hundred students enrolling in industrial arts education. Ten students are enrolled in the average graduate program.

Laboratories average 14,000 square feet of space and equipment valued at \$112,000. Space in schools and state colleges about half of the allotted floor area.

Yearbook II was a logical outgrowth of Yearbook I. Indeed, it had originally been planned as a part of the same volume, but space limitations demanded that they be separated. Yearbook II is a

biographical directory of the profession as of 1951. It describes the profession in human terms.

Biographical data for Yearbook II was secured by sending a questionnaire to all members of the profession. It was compiled over a two-year period, and the final volume will list 1,000 individuals, with complete data for eight hundred and forty-four.

An analysis of volume indicates that 25 per cent of industrial arts teacher educators were born in the three states of New York, Wisconsin, and Texas. A breakdown by geographical areas reveals 15 per cent born in the East, 35 per cent in the Midwest, 24 per cent in the South, 7 per cent in the West, and 2 per cent in foreign countries.

Twenty-four per cent of the educators were married, and 79 per cent had an average of 1.5 children. Average age of the educators was 41.5 years. Twenty per cent were between the ages of twenty-eight and forty-nine.

Only 1.4 per cent of industrial arts teacher educators held no degree; 14.6 per cent held the bachelor's degree; 75.4 per cent held the master's degree; and 11.4 per cent held the doctor's degree. The highest degree was conferred at an average age of 35.55 years.

The teacher educators averaged 5.5 years of experience at the college level and 7.4 years in the public schools. Twenty-one per cent reported no public school teaching experience.

Books have been collected by 12 per cent of the profession, and magazine articles by 27 per cent. Membership in organizations is

by the American Vocational Association with 38 per cent and Spaulding 71 per cent with 50 per cent.

Forty-seven per cent of the educators have travelled in foreign countries and 75 per cent listed specific vocational interests, with heavy emphasis on outdoor sports.

Leader Identification

On the basis of the experience of previous studies, it was determined that leaders may best be identified by the group in which they function. Therefore, a cross-section of the profession, including about ten hundred and fifty (estimated) arts teacher educators was asked to high outstanding national leaders and the general criteria upon which selection was based.

Thirteen leaders were thus identified on the basis of slightly more than one hundred returns. Approximately, the returns were representative of the profession, e.g. the South was represented by 37 per cent of the returns and by 39 per cent of the industrial arts teacher education programs.

Thirty-six individuals were mentioned as leaders five or more times, but there was a definite break between the thirteenth and fourteenth leaders. Hence, thirteen were selected for study. Of these, one failed to furnish either biographical or educational data, and another failed to furnish educational data.

The first-ranking leader was mentioned by 38 per cent of those who returned the questionnaire, the thirteenth leader by 21 per cent.

Each return listed an average of about four criteria as a basis for leadership identification. Fifty-four distinct criteria were identified, and these were arranged in eleven different categories.

Biographical Information

Brief biographical sketches were presented for each of the thirteen selected leaders. An examination of these indicated that half of the leaders were heads of administrative divisions and that they had held their current positions for an average of more than ten years.

The leaders averaged about fifty-five years of age. All held advanced degrees, with nine holding the doctor's degree. They averaged almost six years in public school teaching and more than twenty-five years in industrial or the teacher education. All have contributed to periodicals and they have written an average of two and a half books. They belong to an average of almost nine professional organizations and fraternities.

A comparison of biographical data for the leaders and for the entire profession reveals little difference in terms of birthplace, marital status, general breadth of organizational affiliation, or amount of travel. A fair degree of difference was noted in number of children and in teaching experience in the public schools. There was a marked difference in age, advanced degrees, college teaching experience, and in number of books and opinion articles.

Individual Information

These are the tools with which leaders work. They most often take the form of goals or of methods of obtaining goals. In the tests of this assumption, the selected leaders were asked to name the most critical issues facing industrial arts teacher education and to outline the methods by which these issues should be met. A similar request was directed to a corresponding number of members of the profession selected at random.

Members of the thirteen leaders responded to the request. Twelve brought five three pages, written in longhand, to five pages typewritten single-spaced and enclosing several copies of previously written materials.

A total of fifty-two problems were listed. Five of these were mentioned twice, and three were listed three times, leaving thirty-seven separate problems. Many of these overlapped, as will be revealed later.

Only four reforms were received from the control group, and these listed nine professional problems.

Conclusions

Conclusions drawn here will seek to answer, in so far as possible, three questions:

1. What is the concept of leadership held by industrial arts teacher educators as a group?

2. Are there significant factors in the lives of teachers that set them apart from the general membership of the profession?

3. Will an analysis of the teachers' lives concerning critical issues have any bearing on the future of the profession?

It has been demonstrated that leadership functions around a nucleus of means or objectives. Since, Question 3 took little importance over the others, Questions 1 and 2 may have some significance, however, in any future research concerned specifically with the development of new leadership in industrial arts teacher education.

A Summary of Leadership

An examination of Table XIV will reveal the percentage of industrial arts teacher educators listing criteria for the identification of leaders in each of ten general categories. From the vantage point of the professional concept of leadership, this breakdown is more significant than that in Table XIII, which dealt with percentages of the total criteria listed. For example, it may seem the most industrial listed a number of personal and professional qualities, but listed publications only once.

In comparing the two tables, the "Publications" category takes over the top rank by a wide margin. Eighty-one per cent of the teacher educators listed publications as a criterion of leadership. "Personal and Professional Qualities" dropped to second place with 37 per cent. "General Function," with 31 per cent, and "Activity in Professional Organizations," with 26 per cent, occupy third and fourth

TABLE XIV

TABLE SHOWS PERCENTAGE OF THOSE LISTED CRITERIA
IN RANK CATEGORY

Category	Percentage
Publications	33
Personal and Professional Qualities	30
General Training	25
Professional Organization Activity	24
Program Development	20
Status	18
Philosophy	17
Research	16
Experience	14
Education	13

place respectively. Thirty per cent listed "Program Development," which moved up to fifth place, followed by "Status and Philosophy," each with 18 per cent. "Research" and "Experience" follow, each with 14 per cent, and "Education" trails with 13 per cent.

Therefore, it would seem logical to conclude that the professional aspect of individuals shown in the top hundred contains no particular bias in the direction of individual self advancing, and that the personal and professional qualities of the individual, his general

efforts to promote the profession, and his activities in professional organizations are powerful factors. The development of programs, status, and philosophy contribute to the economy; but research, experience, and formal education are not significant.

The economy, however, is not quite that simple. It must be borne in mind that nothing may be considered a criterion only as it reflects personal and professional qualities, program development, philosophy, or research. Status may enter the picture or it may be considered a criterion, *pp. 22*. Personal and professional qualities may reflect experience and formal education; organizational activity may reflect status. Status, indeed, may include all of the other criteria.

In other words, the question of criteria for leadership is a highly complex one, and the results here obtained must be interpreted in that consideration. There is considerable overlapping of categories, and there is no way of testing the degree of thought that produced a single criterion. It would be foolhardy to attempt a definition of leadership in industrial arts teacher education on the basis of the findings, but they do serve to indicate the general direction of thought in the field. Additional research, concentrating on the specifics of leadership identification, is needed to clarify the picture.

It may be noted here, also, that no single leader on the national scene commands the esteem of a large majority of industrial arts

teacher educators. Only two (see Table III) were listed by more than half of those who returned the identification questionnaire.

Thus, leadership in industrial arts teacher education is not concentrated in the hands of a few individuals. It is fairly well spread among a relative large number of leaders. This is undoubtedly due in part to the comparative infancy of the profession in terms of national significance and to the cleavage in philosophy which will be discussed later.

There is a definite need to industrial arts teacher education for leaders who will be closely identified with the areas in terms of objectives and of curriculum.

The Ages of Leaders

It is not surprising to find that the average age of the leaders is about thirteen and a half years greater than the average of the entire profession, nor that 55 per cent of the leaders are more than thirty years of age, compared with a mere 8 per cent of the entire group.

Nevertheless, the facts would indicate that there is a tremendous opportunity for young men to assume positions of leadership in industrial arts teacher education. This is in no way intended to detract from the contributions of the older leaders, but a more balanced leadership in terms of age might prove to be more representative of the profession.

No special significance is attached to the birthplace or family status of the leader group.

The fact that all of the leaders held advanced degrees and that all but three held the doctor's degree sets them apart from the profession as a whole. Those who do not hold the doctor's degree are in the upper age bracket. This probably is not a coincidence. Despite the insignificance of formal education among educators listed by members of the profession.

While the advanced degree, itself, is no guarantee of leadership, it does indicate a degree of professional ability and interest which the leader must possess. In other words, it is almost certain that leaders in industrial and teacher education will hold advanced degrees and that the great majority will hold the doctor's degree.

To a general lower degree, it is probable that all leaders in the profession will have had some experience in public school teaching. While the leaders averaged slightly less than six years of public school teaching, the least reported was two years.

Closely corresponding to the relative age of leaders is their average of more than twenty-five years of teaching at the college level. The implications are similar to those connected with average age. Despite the fact that experience rated low on the scale of leader identification, the leaders actually averaged eighteen years more experience than the the profession as a whole. Normally, at least, experience is an important component of leadership in industrial and teacher education.

In this connection, it may be noted that leaders reported very little experience that did not have a direct bearing on industrial arts education as a profession. A few reported some practical work in industrial or other areas, but the great majority left college to teach a few years in the public school before devoting full time for many years to industrial arts teacher education. Apparently, there was little room for diversions even though it be indirectly connected to the profession.

All of the leaders have produced a considerable amount of professional writing and the great majority of them are authors of two or more books. It will be recalled that writing ranked far ahead of all other criteria listed in the classification of leaders. The importance of writing as an element of leadership in the profession can not be overestimated.

However, there is little evidence here to establish professional writing as the means or effect of leadership. Leadership certainly can not function without communication. Writing as an important form of communication is undoubtedly a first-ranking tool of leadership in a national profession such as industrial arts teacher education. While it may, by itself, produce leadership of a synthetic nature, it must reflect many other elements if it is to be an indicator of true leadership. Thus no attempt will be made here to evaluate leadership, settlement of this question must await future research.

Other conclusions might be reached in regard to the activities of leaders in professional organizations. All have held important posts in national and state associations and they are members of an average of almost nine professional organizations and three fraternalisms. Whether these activities are a result of or have resulted in national leadership remains in doubt. It remains, however, that national leaders are extremely active in professional organizations of all kinds.

The Ideas of Leaders

It is virtually impossible to sift each of the thirty-seven issues discussed by the leaders into head-and-foot experiments. Many of them have common elements, and most are dominated upon fundamentals of philosophy. However, for purposes of discussion, they have been classified under four main headings: Philosophy, Curriculum, Organizations, and General Professional Problems.

Philosophy

Seven issues have been included under this heading. They are: the need for an analytical study of objectives, the lack of progress made by the mental interpretation mysticism, the role of industrial arts in general education, the acceptance of the general education concept by general educators, the acceptance by industrial arts teachers of mysticism as mystifying and breadth of mysticism.

recognition of behavior changes as important outcomes, and a clarification of differences between trade and industrial arts education.

In discussing the first issue, Leader A states that there is general agreement on over-all objectives but there is a need to study objectives of various specific phases of industrial arts. Though each is treated in a different manner, the next five issues will be centered on the problem of industrial arts in general education. Leader C traces the usual interpretation among its critics and supports it warmly. It is, he states, a "top priority challenge to the profession."² Leader E addresses equal emphasis upon organization, skill, and technical knowledge on the one hand, and freedom of choice and creativity on the other. Leader F states simply that industrial arts work becomes increasingly more general, in keeping with its distinct purposes.

Leader J deals more fully with the problem by listing three issues relating to the more general issue. He asserts that there is a need for greater acceptance of industrial arts as an important part of general education by the general educators, themselves, and of the view of exploration and breadth of experiences by industrial arts teachers. He also cites the need for greater recognition of the prime importance of behavior changes rather than the mastery of subject matter or the acquisition of skills.

Finally, Leader K touched upon the need for orientation of administrators toward clarification of the differences between trade and industrial arts education.

Conclusions

A total of seventeen issues, many of them overlapping, have been included in this general classification. Realizations are wished in such issues as the need to clarify the marginal areas of industrial arts, industrial arts versus fine arts, and the transition of industrial arts. Much of these is concerned with overlapping between industrial arts and other areas.

Related but more confined are the questions of what shall be taught: instructional content, types of day programs, instructional materials, and the orientation program. The account on why shall be taught is reflected in the problems of industrial arts in elementary education and in secondary education, concentration on the junior high school, industrial arts in the small school, and the extension of industrial arts downward into the elementary school and upward into adult education.

Other questions included in the general heading are the place of the multiple technology in industrial arts, evaluation, student teaching, the graduate program, and the role of the industrial arts teacher in guidance.

Leader 2 attacks the problem of marginal areas in terms of vocational inclinations in the junior high school and suggests that the solution should be sought at the state level, because the state is concerned with unified vocational education. He also discusses the problem of industrial arts versus fine arts, suggesting that the

constructively creative handicrafts are a part of the former and the mechanically and expressively creative arts are part of the latter. He believes that superior results by industrial arts in the constructively creative handicrafts may settle the problem. Chapter 3 records a need to clarify, not only the line between industrial arts and vocational industrial education, but also the boundaries of industrial arts with reference to the physical sciences, social sciences, and art.

Instructional content is discussed by two of the leaders. Leader 4 believes that content should consist of occupational samples, either such "industrial arts could have little guidance value,"² Leader 5 simply states that content should become progressively more difficult with advancement through the secondary grades, in both informational and manipulative aspects. According to Leader 6, there is intentional and unintentional confusion brought about by failure to distinguish among various types of shop programs such as art crafts, manual arts training, trade training, and industrial arts. The inference is that all shop programs should not be considered as a single field. He also attacks instructional materials for lack of consistency among authors, lack of balance in written materials, the uniformity of pictures, and the attempt to include too separate fields (i.e., vocational industrial education and industrial arts) between the same covers. Leader 7 calls for a "deliberate dilapidation" of new methods. Leader 8 sees the need for an industrial arts orientation program for all youth, preferably sponsored during grades eight and

view. The implication here is that while the orientation program has long been advocated, little progress in that direction actually has been made; and the profession should concentrate on the practical application of the idea.

Leader A points out the "mountain states" of industrial arts in the elementary school and suggests nationally-sponsored research to clarify such matters as instructional content, preparation of teachers, and classroom organization. Leader E stresses the need for "grad expansion and improvement" of industrial arts instruction in the elementary grades. Leader B sees the role of industrial arts in the upper secondary school as primarily vocational in nature. He concentrates on the need for producing "scientific abilities" in high school graduates. Leader C is worried by the fact that "graduate attention has been centered upon the junior high school," resulting in a mere truncated extension of the junior high school program into the elementary school and an upward extension of the same program into the senior high school. Leaders E and I discuss the need for the development of a suitable industrial arts program for the small school. Both point to the large number of small schools which do not now offer industrial arts opportunities and suggest methods for incorporating programs into the small schools. Leader I suggests the need of greater utilization of industrial arts in the elementary school and in the night evening school.

The role of the analysis technique in industrial arts was attacked from opposite extremes. Leader 3 was the staunch defender of the technique, claiming that "it puts order and organization into the industrial arts shops." Leader 4, however, asserts that industrial arts must "start with job analysis and not a behavioral change procedure based upon an analysis of objectives." Leader 5 also cautions evaluation as a neglected area, suggesting the need for considering broader purposes in evaluating pupil progress. Leader 6 calls for research to determine the type of student teaching best suited to industrial arts, while Leader 7 seeks "strengthening" of observation and student teaching and its application to the field of trade teaching. Predicting that within a decade most industrial arts teachers will have earned the master's degree, Leader 8 sees a need for greater study of the graduate program with special emphasis on the doctor's degree and the advanced graduate courses. He also mentions the role of industrial arts in the graduate program and suggests a revision of our college courses as guidance for all industrial arts teachers.

Conclusions

Only two issues were listed under this general heading—the need for unity of national organizations and the importance of membership in professional organizations.

Leader 1 states that there is room for only one national professional organization in industrial arts teacher education and suggests

that the American Educational Arts Association "transfer the present autonomous organization to the National Education Association or the American Vocational Association, in functional organizational relationship." He believes that such a proposal would help to "clear the present intolerable situation." Leader 2 asks the creation of a national advisory council to suggest ways of uniting outstanding contributions and opinions, while leader 3 asks "an excuse" for not pursuing negotiations and believes the solution will "arise willingly" to comprehend the true relationships between industrial arts and the vocational curriculum.² Leader 1 simply advocates uniformity for all teachers in both groups.

Classification Problems

Seven issues were classified as miscellaneous. Three of these are concerned with organization, but approach different aspects of the problem. Each of the remaining eight seems to be a separate issue which does not fall under any of the preceding categories.

Leader 4 feels that terminology "obscure in the way of clear thinking." Terms, he states, have become crystallized until they are of little value, e.g. "experience means a variety of learned experiences rather than a synthesis to be learned as one approaches something new." He also lists the need to clarify secondary relationships.

The problem of research is mentioned by leaders 4 and 5. The former concludes that we know very little about the development patterns of children and youth be as far as industrial arts instruction

to comment, while the latter states that the greatest need for research is obvious.

The preparation of teachers is, itself, listed as an issue by three of the leaders. Leader 6 points out how closely teacher preparation programs differ in quality and the need for strengthening the educational perspective of undergraduate students. Leader 2 raises the question: "say a person acquires stuff skill by intensive application in trade or craft shop classes and then learns to teach by taking professional courses and student teaching?" He suggests research to study the question. Leader 1 simply states that industrial arts teachers "should be more broadly prepared."

Leader 5 is concerned with the "laissez-faire handling and confinement of any department of industrial arts teacher education where reasonable financial resources do not exist . . . and where often no demand exists for additional teachers." Leader 7 suggests the need for standardization of accreditation of industrial arts teacher education departments. The greatest need of industrial arts teacher education is for "a group of nationally accepted leaders," according to Leader 3. He sees a bright future for programs, who require to lead industrial arts teachers into a selective national organization.

Leaders 7 and 8 agree that the recruitment of students is a critical issue. The future will approach the problem through industrial arts teachers in the high schools and senior students in

industrial arts teacher education. The latter offers the road for higher teachers' salaries and "a more realistic scheduling program."

Finally, the problem of supervision was listed six times. Leaders 1 and 2 declared themselves by the mentioned industrial program over industrial arts supervision. Leader 2 would assign industrial arts to "the department of secondary and/or elementary education in the state department and appoint state and local supervisors who are aligned to industrial arts," except to the term "industrial education," and separate industrial arts from vocational education at the teacher education level. Leader 1 points out the need for state and local supervision of industrial arts apart from vocational industrial education, while leader 1 takes the opposite view: "This should be combined with supervision of Trade and Industrial Education . . . To be otherwise puts the two phases of the program against each other in a stupid controversy."

The approach

A brief analysis of suggested approaches has a definite bearing on the issues raised by the leaders. It may help to clarify professional problems in general education.

For example, in this instance a philosophical approach is suggested. While this approach does not deal in specifics, it again highlights the basic problem of philosophical differences. Research, though mentioned only twice as a specific problem, was listed seven times as a suggested approach to the problem. Curriculum reorganization,

state and local supervision, and the teacher education program must use national standards as a vehicle for the solution of problems. Professional group action was suggested from time to time.

An approach to problems through new instructional materials, including textbooks, was suggested from time to time. Other approaches included public relations and joint committees, such as those that administrative changes and utilization of assistance from outside groups, labor union, and state-sponsored conferences and extension of the industrial arts program, were made.

Open Social Institutions

One of the problems facing industrial arts teacher education, according to the leaders, is the need for independent supervision of industrial arts at state and local levels. Supervision was discussed by the leaders six times, more than any other specific topic, and five-thirds of the night favored independent supervision.

This problem is less concerned with the provision of state and local supervision of industrial arts than it is with freeing present supervision of industrial arts from the officialdom of State and Industrial education.

The need for research is very much in evidence. This issue is clear in light of the frequency with which the leaders would depend upon research for the solution of problems.

A third major problem facing the profession is the question of the role of industrial arts in varying school environments. This

careless objections and statements of various grade levels and in schools of different sizes. Seven specific issues were directly related to this problem.

The question of instructional material, including materials of instruction, needs further study and clarification. This problem is closely tied in with that of resources, and it is supported by six issues listed by the leaders and by the volume of suggested responses by way of corrective change.

There is at least an implied need for expanded testing of the general education content of industrial arts. These are changes the issues which equip or by inference that little has actually been accomplished in this direction.

Leaders in industrial arts teacher education are more concerned with year-all problems of industrial arts than they are with the specifics of their own profession. This is as it should be, since it is indicative of a primary interest in the children and youth served by the public school. Only nine of the thirty-seven problems stated by the leaders were exclusively concerned with the teacher education phase of industrial arts. While the teacher education program was mentioned as a problem only three times, it was suggested as a solution of isolated six times. There is an apparent general acceptance of the belief that the problems of industrial arts teacher education take root in the problems of industrial arts teachers,

The Basic Situation

Running in a continuous stream through the thinking of leaders who have participated in this study, there has been evident on the surface of us an inconsistent fundamental difference of philosophy. This is no "simple controversy," as Leader I would have us believe. It is not a new problem, nor is it in the exclusive property of industrial arts teacher education.

The change in industrial arts teacher education is the logical outgrowth of the history of industrial arts education in the United States during the past century-thirty years. The early concept of manual training was in keeping with the educational psychology of the day. It differed little in structure or technique from traditional industrial education which originated in the technical institution. Thus, the relationship between manual training and trade training was at first an intimate one.

However, changes in science, psychology, and philosophy brought a change to the objectives of manual training in the public schools. The new demands were apparent, even at the turn of the century, and in 1906 Charles E. Nichols appealed for the adoption of the term "industrial arts" in the light of the new objectives.

The result is considerable confusion. The term "industrial arts" has been used to describe everything from a broad experience intended to benefit all children to a fixed pattern for the development of skill in a single type of industrial work. In many cases, there has been

1944a, if my attempt to distinguish between "industrial arts" and "industrial education."

There is a distinct danger of overspecialization in an attempt to analyze the resulting cleavage in industrial arts teacher education. However, it is substantially true that the profession today is divided into three general groups.

The first of these might be called the "special industrial education" group. It views industrial arts primarily from the standpoint of skills and subject matter to be learned in shop work. Objectives range all the way from the development of consumer knowledge to the learning of machine skills; but in any case, the emphasis is on production of the product. Quality of work and efficiency of operation are stressed, and specialization at the upper grade levels aids in attaining vocational objectives.

The second, or "general education" group holds that industrial arts is a field of education. It would make the term "industrial arts" at least as comprehensive as "social studies" or "sciences." Industrial arts opportunities should be made available to all youth at all age levels, with a primary objective of popular understanding of industry and technology. The shop, or laboratory, becomes a method of teaching; the skill, the project become instruments of investigation and understanding.

Between these, there is a third intermediate group. It consists of those who knowingly seek a compromise between the special industrial

and general education concepts, those who keep a foot in each camp for political reasons, and those who simply are unable to make up their minds.

The first group is represented, generally by the Industrial Arts Section of the American Vocational Association, and the second by the American Industrial Arts Association of the National Education Association. These who represent a merger of the two industrial arts groups, under the aegis of either parent organization, are closing their eyes to the basic conflict. The present national organizational framework appears to be the best that can be devised for the current growth and development of industrial arts teacher education.

Either conceptual group could function, let alone make progress, under the organizational domination of the other. Were the American Industrial Arts Association to throw in the towel, all of the energies of its members could be concentrated in the argument of general education versus special industrial education.

Leadership and the Future

The importance of leadership in industrial arts teacher education as a national profession is clear from this study. Also apparent is the vital role played by the ideas of leaders. Outstanding leaders do have definite ideas concerning professional problems, and they are eager to make use of any effective vehicle of expression in expressing these ideas. Their primary instruments have been books, periodicals, and professional organizations.

The successful assimilation of ideas into the learner apart from the average industrial arts teacher's ability. Lack of response on the part of the control group would indicate that the average member of the profession either has no firm ideas concerning professional problems or does not care to address his ideas.

Basically lies the task of instructor's leadership in industrial arts teacher education--to assist the entire profession in the clarification of its purposes and of the avenues by which these purposes may best be approached.

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Professional and Academic Organizations (Memberships and Affiliations)

Areas of Specialization

Travel

Professional Activities

APPENDIX 12

AMERICAN COUNCIL ON INDUSTRIAL ARTS TEACHER EDUCATION
a Division Of The American National Arts Association and The National Teachers Association

WILLIAM H. WILLIAMS, JR., President
University of Illinois, Urbana
and A. WARREN, Executive Director
State Board of Technical Arts

JOHN J. GUNNETT, JR., Vice President
Ball State Teachers College, Muncie, Indiana
C. BRUCE HANCOCK, Treasurer
Teachers College, Chicago, Illinois

January 3, 1950

Friend, Department of Industrial Arts

at Ball State Teachers College, Muncie, Indiana

at Teachers College, Chicago, Illinois

Dear Sir:

Last May in Washington's "Switzerland House" Trial, the AMERICAN COUNCIL ON INDUSTRIAL ARTS TEACHER EDUCATION was formally established and dedicated to the improvement of teacher-education programs.

A major feature of the ACITE is to be an annual series of year-books which deal with pertinent matters of interest and concern to the profession. The initial volume of this series is scheduled to be available to all members during the 1951 Convention. It will consist of an Inventory - Analysis of Industrial Arts Teacher Education Facilities, Curriculum, and Program together with a Study Map in Industrial Arts Teacher Education. This study will provide the first intimate glimpse highlighting the characteristics of our teacher-education programs and the permeative talent loss. It will also fill the immediate and pressing need of providing important personnel and laboratory information for the rapidly expanding national defense program.

Your enthusiastic and cooperation in providing the Inventory-Analysis data and the distribution of the Study Map, listing given to the members of your Industrial Arts Society and their future open consultation will be greatly appreciated by the Council and the entire profession.

Very truly yours,

William H. Williams, Jr.
President

End a Letter!

AMERICAN BOARD OF EDUCATION, WITH THANKS, REQUESTS

The questionnaire returns from institutions of higher learning are nearly complete. Our reports show, however, that we have not received the materials recently mailed you.

I should greatly appreciate hearing from you at your earliest convenience.

Sincerely,

Walter B. Williams, Jr.
President

ANNEX II

AMERICAN COUNCIL ON INDUSTRIAL ARTS TRACKER EDUCATION
a Division of The American Industrial Arts Association and The National Education Association

Walter E. Williams, Jr., President
University of Florida, Gainesville
Harry E. Williams, Executive Secretary
National Education Assn., Wash.

Sam J. Spencer, Jr., Past President
Buffalo Technical College, Buffalo, Indiana
C. August Williamson, Treasurer
Yeshiva College, New York

March 17, 1934

Head, Department of Industrial Arts

Dear Sir:

Our records show that copies of the attached materials were mailed your institution several weeks ago. In the event they did not reach you or have not been returned within the past week, please be kind enough to give this your personal and immediate attention.

It is felt by the Council that the completion of these data will do much to further an understanding of industrial arts contributions being made by technical education groups in the nation. Kindly advise us in making the data complete.

Very truly yours,

Walter E. Williams, Jr.
President

APPENDIX F

AFRICAN COUNCIL ON INDUSTRIAL ARTS TEACHER EDUCATION
a Division Of The American Industrial Arts Association and The National Teachers Association

Walter R. Williams, Jr., President
University of Illinois, Urbana

Sam J. Wilson, Jr., Vice President
Ball State Teachers College, Muncie, Indiana

Joe A. Wynn, Executive Secretary
Illinois Secondary School, State

C. Eugene Montgomery, Treasurer
Teachers College, Columbia, New York

April 5, 1955

Assistant Professor _____

Dear Professor _____:

In consultation of our files indication we have not received
desired information concerning you.

It is requested that you kindly fill out and return the attached
sheet. This will be appreciated.

Very truly yours,

Walter R. Williams, Jr.
President

ATTENTION TO

AMERICAN COUNCIL ON INDUSTRIAL ARTS TEACHER EDUCATION
Jointly of The American Industrial Arts Association and The National Education Association

WILLIAM R. WILLIAMS, JR., President
University of Illinois, Urbana

JOHN J. SHAWNEY, JR., Past President
Ball State Teachers College, Muncie, Indiana

JOHN A. WATKINS, Executive Secretary
New University, Oxford, Ohio

W. HENRY HARRINGTON, Treasurer
Brooklyn College, Brooklyn, New York

April 16, 1933

Head, Department of Industrial Arts

Dear Sir:

Once again, I take the liberty of writing with reference to the study being sponsored by the American Council on Industrial Arts Teacher Education.

I understand you are extremely pressed for time because of many demands which are ever present. Permit me, however, to request again that you take a moment to provide the most pertinent information asked in the accompanying questionnaire and place it in the return mail.

Please do not regard this as being merely another questionnaire which is to form the basis of a statistical study. Such is not the case. This is for your institution, and your institution should be represented in the findings of the Council study.

A preliminary report is being prepared for the New York State Forum, and must be completed by April 25th. We would like to include your institution. Kindly let us hear from you by return air mail.

Very truly yours,

WILLIAM R. WILLIAMS, JR.
President

MEMBER COUNCIL ON INDUSTRIAL ARTS TEACHER EDUCATION
in response to the American Industrial Education Council and The National Industrial Association

Robert L. Williams, Jr.
President, Industrial Arts
and A. William George, Secretary
Industrial Arts Council, Inc.

March 25, 1952

Harry C. Smith, Jr., President
National Industrial Arts Council
C. Robert McCarty, Secretary
National Industrial Arts Council

Dr. J. E. Bailey
Division of Industrial Education
University of Washington
Seattle, Washington

Dear Dr. Bailey:

Let us take this opportunity to extend to you a cordial invitation to attend the 1952 annual convention of the American Council on Industrial Arts Teacher Education in Chicago.

The Council's Yearbook I, a nation-wide professional directory of personnel, programs, and physical facilities, will be distributed to members at a luncheon April 30. It is the desire of the Council that your institution will be represented at this meeting. Dr. Fred J. Schmidt and others have prepared an outstanding program. A detailed account of the activities will appear in an early issue of The Industrial Arts Teacher.

Meanwhile, the publisher's edition for Yearbook II says in part: "The Council's Yearbook II will take the form of a Main The 1952 Industrial Arts Teacher Directory. Names of all members of the profession will be published, together with such pertinent information as place and date of birth, family status, present position, a record of formal education, professional and other work experience, publications, memberships and offices, areas of specialization, awards, and non-national interests. According to Council Policy, the individuals listed on the attached sheet are members of past staff. We have no detailed information for those whose names are checked with red pencil. Family name one of the enclosed forms and return them to this office at your earliest convenience. We have records as of 1950-51 for those not checked. If there is any change in title, address, or degree, or if there have been additions to or deletions from your staff since 1950-51, will you please note in the attached sheet and return. We will assure that correct reports are correct for those who need no new information.

Your cooperation will be greatly appreciated and will be of valued service to the Council.

Very truly yours,

Robert L. Williams, Jr.
President

APPENDIX B

UNIVERSITY OF FLORIDA
Gainesville

College of Education

April 18, 1958

Dr. E. Macfield
Columbia University
New York, New York

Dear Dr. Macfield:

Parallel to the American Council study, Which Way Is
American Industrial Arts Teacher Education? I am conducting
research concerning certain aspects of current secondary
within our profession.

As an active industrial arts teacher educator, you can
be of great assistance in helping to identify present leaders.
I would be most appreciative if you could study last those
whom you consider outstanding national leaders in industrial
arts teacher education on the attached sheet, indicating a few
broad reasons for your selection, and return in the enclosed
stamped envelope.

The names of selected leaders will not be published in
the report.

My sincere thanks for your cooperation.

Very truly yours,

Ray F. Ingram, Jr.,
Director
Industrial Arts and
Technical Education

APPENDIX I

COMPARISON OF INDUSTRIAL AND TRADING ACTIVITIES

Name

Occupation

General Certificate for Admission

APPENDIX II

UNIVERSITY OF IOWA
IOWACVILLE

College of Education

June 3, 1912

Dr. H. E. Loomis, Head
Department of Industrial Education
University of Missouri
Columbia, Missouri

Dear Dr. Loomis:

You have been selected by members of the industrial arts teacher education profession as one of thirteen outstanding national leaders in the field. About 250 educators, including important heads of all institutions offering industrial arts teacher education and all members of the American Council on Industrial Arts Teacher Education, were asked to select the top leaders, suggesting the reasons for selection.

The information will be incorporated in a study which I am conducting with Dr. Walter E. Williams, Jr. A volume will be published in the introduction to Teachers II of the American Council, and I plan to submit an abstract in article form to The Industrial Arts Teacher.

I should like very much to have along what ideas are present tentatively in thinking in terms of the profession as a whole. I believe that these are of tremendous importance and that the ideas of leaders should receive much wider notice than they have in the past.

Would you be willing to write to me, listing these problems facing the profession, which you feel are most urgent, and telling me briefly how you believe the problems should be approached? I would very much appreciate your cooperation; your contribution will be of stamp importance. Names will not be published in the study.

Sincerely yours,

Ray F. Montgomery, Jr.
Instructor
Industrial Arts

OF LETTER XII

UNIVERSITY OF MINNESOTA
MINNEAPOLIS

College of Education

August 11, 1933

Dr. Oscar J. Smith, Dean
Department of Industrial Education
University of Minnesota
Minneapolis, Minnesota

Dear Dr. Smith:

I am wondering whether you received my letter of June 6 concerning problems of industrial arts teacher education. Only four of the thirteen individuals, selected by members of the profession as the outstanding national leaders, have failed to reply thus far.

I feel very deeply that the study will be incomplete without your contribution. In order to complete it on schedule, I will have to receive all replies by Sept. 15.

The following request was made:

"Would you be willing to write to me listing those problems facing the profession, which you feel are most urgent, and telling me briefly how you believe the problem should be approached?"

You may be interested to know the number of problems listed by each of the eight persons (as 4, 10, 3, 4, 3, 3, 3, 2). They are of a broad nature, but the most part, dealing with general matters of policy. Problems have been stated in a few instances, followed by brief suggestions for solution.

I am most anxious to include your views in the study.
May I hear from you?

Sincerely,

Ray F. Longstrech, Jr.,
Instructor
Industrial Arts

BIOGRAPHICAL SKETCH

Ray T. Sargenson, Jr., was born February 23, 1915, in Lynn, Massachusetts. He received the Bachelor of Arts degree from Dartmouth College in 1936. For the next three years, he was employed by the Credit Union National Association, Boston, Massachusetts, and he worked as a reporter and editor for the Gloucester State Journal from 1939 to 1940.

Mr. Sargenson enlisted in the United States Army Air Force in April, 1941, serving for a year at Brooks Field, Texas. After receiving a commission, he served for three years in the Headquarters and European Theater of Operations. He is now a major, United States Air Force Reserve.

Mr. Sargenson organized and administered the Diversified Cooperative Teaching Program at Leonides County High School, Bradenton, Florida, during the year 1947-48. He received the Master of Arts in Education degree from the University of Florida in September, 1949, and served for two years as instructor of historical art in the Technical Arts Department of the University of Florida College of Education. He has been on leave of absence since September 1, 1951.

This Dissertation was prepared under the direction of the Chairman of the candidate's Supervisory Committee and has been approved by all members of the Committee. It was submitted to the Dean of the College of Education and to the Graduate Council and was approved as partial fulfillment of the requirements for the degree of Doctor of Education.

J. R. White
Dean, College of Education

J. H. Lupton
Dean, Graduate School

EDUCATION COMMITTEE

W. R. Williams Jr.
Chairman

Wm. C. Smith

Wm. C. Smith

Wm. C. Smith

Wm. C. Smith

Wm. C. Smith